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## Education of Exceptional Children and Minority Groups

Reviews the literature for the three year period since the issuance of  
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## INTRODUCTION

THIS ISSUE of the REVIEW includes sections which follow closely the content and scope of the June 1941 issue. Prepared under the pressure of wartime conditions, it has not been possible to include all the research materials which would otherwise be appropriate. Sections on the visually handicapped, the delicate, and the crippled were reluctantly omitted. It is to be hoped that this omission may be covered in the next corresponding issue of the REVIEW.

The growing interest in the education of exceptional children is evident in all sections reported. Especially significant are the recent clarifications concerning the philosophy of education in the special fields, and the increased tendency to apply objective and experimental procedures in the study of these problems. Research has been especially fruitful in the fields of speech and hearing. Several new statewide programs on the education of the hard of hearing follow patterns which are worthy of consideration by those interested in other divisions of special education.

The committee in charge of the issue takes this opportunity to thank the contributors for their cooperation.

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## CHAPTER I

### General Problems of Philosophy and Administration in the Education of Exceptional Children

ARCH O. HECK

RESEARCH DURING THE PAST THREE YEARS, dealing with problems of philosophy and problems of administration in the education of exceptional children, is scarce. There are discussions of some of these problems, usually incidental, in connection with the treatments of quite different problems related to the education of exceptional children. Many of these can be profitably considered in this introductory chapter despite the fact that they have not lent themselves to research technics during the past triennium.

#### Problems of Philosophy

The education of exceptional children is based upon the same philosophical concepts as is the education of children generally. The Educational Policies Commission (1:15) said that "the four main objectives of education are self-realization, human relationships, economic efficiency, and civic responsibility." According to Baker (1:15), "In the education of exceptional children it is an immediate challenge to meet and realize these objectives." The general aims therefore are the same (10:12). The exceptional child needs a program of education that will be adapted to his interests, abilities, and capacities.

#### Exemption from School

One of the principles of all education is that there should be equality of educational opportunity for all (10:6). Despite all talk of equality of educational opportunity, we do not have it for exceptional children. Each of the forty-eight states allows exemption from compulsory school attendance if a child is mentally or physically incapable of profiting by the program of education provided (10:6). Few or no schools were, nor are they now, provided for the exceptional. Rather than exempt mentally and physically handicapped children from school attendance, we should demand that all local school districts provide a program of education that would meet the needs of these exceptional children.

Boston (8) is illustrative of what can be done for children with defective vision. There are fifteen classes in different sections of the city. Haley said that "As the state makes education compulsory for all, it willingly shares in the financial burden of these special classes. This is an attitude that all states need to adopt if they seriously espouse equality of educational opportunities." Not always does the state agree to assist in financing the education of all the exceptional children for whom it is willing to provide supervision. Wagner (28) pointed to this problem in Ohio. He urged state

assistance for the education of exceptional children other than the physically handicapped.

### Needed Instruction

Needed instruction for exceptional children is rarely found in rural areas and is very inadequately provided in most cities. The incidence of most types of exceptional children is very low. Thus small school districts do not have enough children with a given type of handicap to warrant the provision of expensive equipment. The organization of larger districts would help solve the problem, but in the meantime instruction needed for these handicapped children is not provided.

### Emotional Problems

The exceptional child has unusual problems emotionally. The crippled child with his deformities is frequently not accepted by the social group. He sees his inability to do things that the normal boy can do. The deaf child struggles with his speech or he uses strange and unusual signs or gestures in order to have communication with others. He struggles hard for that social contact which the hearing child achieves so easily. The blind resent pity from others and yet there are so few of them that most people have little or no opportunity to know them well. Not knowing them, they tend to feel sorry for them. The child with defective speech has unusual problems. The delinquent child is stigmatized due to social resentment against the violation of certain standards of social relationship. The child of low academic ability has often had built up, even in the home, a feeling of discouragement. The gifted child faces the problem of being impatient with those of average or low ability.

These unusual situations tend to cause the children to become emotionally disturbed. Few regular teachers have that training needed for understanding these children, and yet the exceptional child may find himself completely unable to cope with his academic school program unless this emotional blocking is resolved. Surely equality of opportunity does not exist unless this problem is solved.

### Costs Increased

The provision of special equipment for small groups, the hiring of well-trained teachers, and the attempt to give personal guidance and direction to these exceptional children in an effort to solve serious emotional problems will increase the costs of the total educational program (10:8). Parents recognize and accept willingly such costs upon their own part in order to give their handicapped child a better opportunity. Thus far, boards of education have adopted the financier's, rather than the parental, point of view in deciding educational policies relative to the education of school children. They take advantage of a law that permits handicapped children to stay out of school and thus make them even more handicapped for life instead of spending the money necessary for establishing a program of education that would meet the needs of these handicapped children.

Even when attempts are made to provide an educational program for exceptional children, that program is frequently so narrow in scope that the handicapped child has no real opportunity to develop his abilities to the maximum. Many a blind boy might have entered a profession instead of being tied to broom-making. The school program must realistically take into account the child's handicap, but we must be sure that in so doing the program does not drastically limit the educational opportunities of these youth (10:14).

### Acceptance of Responsibility

Many handicapped children are faced with a unique problem. If physically handicapped, they have often been given special care and consideration in the home and by their immediate friends. Things have been done for them which they might have done for themselves and which the average child does for himself. They like being waited upon and come to school fully expecting the same attention that they had been in the habit of receiving at home.

Teachers who are specially trained for instructing these handicapped children are well aware of these problems. They quietly but firmly insist that the children assume the responsibility for performing those acts which are so much a part of daily living and which the handicapped child is perfectly capable of performing if given skilled help and direction in doing them (10:113). Willingness to accept responsibility and habitual acceptance of it by these young people are important goals in the education of exceptional children.

### Exaggeration of Differences

Most teachers of exceptional children would probably agree that the differences between the exceptional child and other children should not be exaggerated. That these differences do exist, however, cannot be ignored. The problem faced is one of degree: how far must one go in differentiating the educational program for the handicapped from that for the average?

Baker said (1:8), "In many fundamental ways all children are alike. Whether they are considered normal or exceptional there is a large central core of similarity among all of them. The variations are mainly a matter of degree and hence likenesses rather than differences should be emphasized." Continuing, Baker said, "In any school system where exceptional children have full or part-time provision of special classes or schools, problems of how to organize . . . are frequently baffling . . . as far as possible the exceptional should be allowed to have some opportunities to mingle with the general group of children. The ability to coordinate these programs and fuse them in such a manner that they seem to be one distinct entity is one of the big tasks of organization. The question of the effect and the implications of partial or complete segregation have never been thoroughly discussed nor completely settled."

Berry (4), reporting in 1941, did a good job of presenting a case

against segregation. The other side of the problem needs attention. Sumption's study (24) presented certain evidences favorable to the formation of special classes for gifted children. He said (24:172), "It is recommended that every gifted child not only be offered the opportunity but be encouraged to participate in the Major Work program." He continued, however, to say that "a wider participation by Major Work pupils in the extra-curriculum activities of the school, particularly in team games and school projects, should be sponsored and encouraged. Segregation should not mean isolation." Carlson and Wiles (5:73) reported the organization of a class for the gifted at Brockton, Massachusetts. As a result of their experience they concluded that "In a special class it is easy to provide unique experiences and learning aids for the pupils. Pupils were not held back by slower moving groups. Pupils had less chance to develop unwholesome work habits, such as dawdling. Each person's thinking was challenged by others with equally high intellects." As Baker so well pointed out, we still have little evidence as to which procedure is the best.

Lee, in his study of the education of crippled children, said of the Oakman School, "It appeared that the physical and educational needs of the children were being met effectively and well insofar as they were within the scope and responsibility of the school" (15:275). The superintendent of the Los Angeles schools reported (26:3) that they have "moved into a new building especially designed to meet the physical, educational and cultural needs of the deaf and hard of hearing children." He said, "We are assured that the more we can help these children the more they will be able to serve our community." The Nineteenth Yearbook of the Department of Elementary School Principals of the National Education Association (21) presented many reports of special schools and classes indicating effective work. Heck (10) did the same thing in his textbook, *Education of Exceptional Children*.

Philadelphia, for many years, had tended to decentralize its program for educating crippled children. Mendenhall (20) reported that in 1937 a \$340,000 one-story structure was opened for the education of cripples. Modern devices for caring for crippled children have been included; the building covers a whole city block. There were 425 children enrolled at the time of her report. Thus one more city has gone the way of greater centralization of facilities for educating its crippled children. Hall (9) reported a new school for cripples at Denver, said to be one of the most beautiful and best equipped schools for crippled children in the world. It cost \$398,250.

It is entirely possible, as research is continued, that there may be certain types of exceptional children whose educational program could be most effectively planned without segregation, whereas others could definitely profit by segregation. Baker's implication that much research is needed upon this problem is most sound. Before schoolmen abandon well-developed programs of education for exceptional children, they should conduct most careful research as to the effectiveness of segregation versus nonsegregation.

## Problems of Administration

### Financing the Education of Exceptional Children

In theory it is not agreed as to whether the education of exceptional children should be financed upon the same basis that all public education is to be financed, or whether some unique pattern for financing it should be established. At present, practice tends in the direction of setting up unique patterns. These patterns Heck (10:451) described in some detail; they are (a) the excess cost plan, (b) the teacher basis, (c) the pupil basis, (d) the class basis, and the like. Each of these bases represents special funds coming from the state to help support the local program of educating exceptional children. It is sometimes argued (10:448) that exceptional children should have their education financed upon exactly the same basis that the education of other children is financed. This is probably sound if the state will require that every locality make provision for the education of exceptional children.

If this were done, exceptional children would be cared for. In case the state puts the financial burden of financing education upon local districts and aids only those unable to meet state standards, even then the exceptional child could be cared for. In case the state accepts a responsibility for financing the basic part of the public-school program, the exceptional child again would not be neglected (10). If federal aid is generally granted, the exceptional child would still be cared for. There is needed, however, the state requirement that special provision be made by all school districts to educate their exceptional children. Justification for the necessarily increased costs is fairly clear (10).

### How Organize?

Shall exceptional children be taught in state schools, in public special day schools, or in special classes? In rural areas is it impossible to educate the exceptional child except in the regular classroom with regular children; can they be taught in special groups locally; or must they be sent to state schools in cases where special facilities are essential? These problems have tried, and still do try, the patience of the school administrator. The problem is far from being solved. Lake (12) reported an experiment running in New Hampshire where vocational training in farming is given to youth who come from rural areas and who are interested in farm work. The school is located at Henniker, New Hampshire. Renovation of the buildings for school purposes began in July 1941. We need many such experiments. It seems unfortunate that our handicapped must always be housed in state schools or in city day schools. Maybe local rural schools will be a partial answer to the problem of how to organize.

### Prevention

Probably the most important administrative problem in the education of handicapped children is that of prevention. Its goal is to prevent handi-

caps so successfully that no handicapped children are available to be educated. And yet prevention is a program that demands administrative skill if it is to be promoted effectively. Swartwood (25:15) said, "Preventive medicine seldom is spectacular" and, referring to the prevention of deafness, "this aspect of it is not one of the exceptions." It is much more spectacular to cure serious defects in speech than it is to set in motion the necessary machinery to prevent the speech defect from becoming serious.

### The Curriculum

The administrator is constantly facing the problem of what to teach; this is true for the school's regular program; it is particularly true for the exceptional child. Beaman (3) urged that schoolwork be related more closely to life outside the classroom. She said that "Translation of environment into educational objectives for retarded children would make impossible the glaring example of frustration and divorce from reality so often observed in special classes."

This is sound philosophy but the administrative problems of achieving this goal are difficult, and research indicating success in achieving it is scarce.

### Employment

After educating the handicapped, the administrator faces the problem of placing such young people in satisfactory positions. This problem has caused much heartache both to the handicapped youth concerned and to the interested educator who has attempted to make the placement. In theory, we educate the handicapped so that they may become self-supporting, be able to stand upon their own feet, and make their own contribution to society. Too often, even the capable handicapped youth is discriminated against. Lavos (13) made a study of various civil service commissions to discover what was being done in the way of employing the handicapped, and what success the handicapped had when they were employed. He found that the number actually employed was small but that those employed did well. He concluded (13:14) that "It is essential that public personnel administrators accept the simple idea that the basic consideration is the defect in relation to job requirements and not the simple prohibition of all handicapped workers regardless of the duties of the particular job." He said, "The most desirable procedure would be to permit the handicapped to take examinations, to lessen arbitrary physical requirements, and to place eligible handicapped workers in jobs suited to their abilities." Maybe these recommendations represent the direction in which all placement officials might move in attempting to be fair to the handicapped and to the employer.

Cromeenes (6) reported the results of a guidance program with the blind which he thinks contributed materially to helping the blind student become more able to adjust himself vocationally; he became able to appraise his shortcomings and his strong points more objectively, and to

evaluate his vocational possibilities more realistically. These conclusions are, of course, based upon the writer's estimate of the program and are not defendable by wholly objective data. Palmer (23) described an attempt of the New York State School for the Blind to make practical a vocational training program. The program puts boys into actual positions as a part of their training; some success has been achieved in the actual placement of these youth at the end of their schooling period. The writer urged (23:101) that "every effort should be made now to train and to place visually handicapped individuals in non-defense industries so that, after the war . . . the blind workers will have jobs. . . ." He thinks that "educators of the blind are today faced with one of the greatest problems, as well as one of the greatest opportunities, in the history of work for the blind."

### Growth

What is the future of special education? Lee (15) reported that "During the last fifteen years enrolments in braille and sight-saving classes have doubled. During the last twenty years enrolments in day schools for the deaf and hard-of-hearing have increased 464 percent; the number in classes for slow learning children have increased 400 percent. During the last ten years classes enrolling crippled children have doubled; for low vitality children, enrolments increased 140 percent; for the defective in speech, enrolments were multiplied more than five times; for the gifted they nearly doubled. The only area in which special education did not appear to be moving definitely ahead was in educating socially maladjusted or behavior problem children. Enrolments in 1940 were 10 percent ahead of 1930; but the 1940 enrolment was 2,176 less than in 1936" (15:65).

### Pupil Records

Probably at no place in the school system are records of pupils more important than in the education of exceptional children. The fact of being exceptional means that these children differ in one or more respects most radically from most of the pupils of their age or grade group. This means that teachers need, more than for the average pupil, to know the facts about exceptional children. Good (7:78) pointed out this need and described in some detail a system of records as well as the philosophy underlying record keeping for exceptional children. His philosophy applies equally to all pupil record keeping.

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## CHAPTER II

### Administration of Special Education

HARRY J. BAKER

EXCEPT FOR A COMPARATIVELY FEW PRINCIPALS of special schools, the administration of special education is in the hands of principals of regular schools in which most classes are housed. These principals usually have the guidance of an assistant superintendent or supervisor assigned to the education of exceptional children.

Books on general school administration are gradually bringing in more material dealing with exceptional children, and with problems of special adjustment. In *Fundamentals of Public School Administration*, Reeder (12) dealt with truants, bright and dull pupils, special classes, and health, and presented pictures of handicapped groups. Altho he discussed many phases of administration, there was little attempt to relate them to the special adaptations necessary for exceptional children.

In the 1940 revision of *The Elementary School*, by Reavis, Pierce, and Stullken (11), a better integration has been effected, due in part to the specialization of one of the authors. In the classification and promotion of pupils there is a discussion of ungraded rooms for retarded children and potential failures and for those diagnosed as subnormal or borderline in mentality. It was inferred that such classes are beneficial to the pupils, as well as making for more efficient classification of normal pupils. They stated:

Within his own school the principal will be concerned with the following major problems: first, the selection of all cases for special education; second, the extent and type of segregation and adjustment which are necessary to care for the cases found; and third, the type of education and training to be provided to meet the needs of the special groups located within his school. All three of the problems require definite administrative organization and procedures (11:217-39).

The identification of the deviate children in a school will be facilitated, if the principal possesses a broad knowledge of the deviate types and the special agencies that may be utilized in their identification, diagnosis, and treatment. The principal must understand the special needs of the deviate children in order to make administrative provisions for them and to direct their education to the end that disabilities may be overcome or compensated for and the abilities possessed developed to the fullest possible extent. He must also be able to offer guidance to the children which will enable them to find satisfactory employment for their skills and abilities when their school life terminates.

#### Mental Hygiene

Mental hygiene is an important factor in the administration of special education. Exceptional children deviate from the average not only in their major handicap but disclose many emotional and social deviations under the general topic of mental hygiene. Administrators of special education must be familiar with mental hygiene not only as it affects exceptional

children but also in their contacts with various agencies that service these pupils upon a mental hygiene basis.

Mental hygiene has assumed an important role in research since three issues of the REVIEW OF EDUCATIONAL RESEARCH have dealt in part with this topic—Vol. VI, No. 5 (December 1936); Vol. X, No. 5 (December 1940); and Vol. XIII, No. 5 (December 1943).

### Teacher Training and Qualifications

Earlier reports on the education of special teachers were presented by Schleier (13) in 1931, by the U. S. Office of Education (15) in 1938, and by Wallin (17) in 1938. The state superintendent of public instruction in Michigan (4) issued a bulletin in 1942 approving thirty hours of specialization as the minimum for special class teachers in that state.

The mental and physical health of all types of teachers, both regular and special, has been the subject of recent investigations. A report, considered as rather extreme in some quarters, was made by Altman (1) on the general teaching staff of the New York City Schools. Out of 1500 teachers examined, he noted that 33 percent were maladjusted and 12 percent were in need of personal psychiatric service. Symonds (14), in a survey of ninety-eight teachers, found that personal problems were the most frequent complaint, including deaths in the family, friendlessness of the community, and feelings of inferiority; second in order were professional problems, mainly conflicts with superior officers; and third were standards of living, lack of recreation, and working conditions.

Gould (7) compared the age at death of 2500 teachers with an equal number of nonteachers and noted that the teachers lived slightly longer, but a disproportionately large number die of heart ailments, digestive diseases, and cancer, all of which he believed may be associated with the strain of teaching. Teachers of atypical classes had 54 percent more absence than first-grade teachers. Factors seriously affecting the teachers were uncertainty of tenure, hypercritical supervision, low salaries, unattractive surroundings, inadequate equipment, inordinate size of classes, new curriculum demands, and personal restrictions.

### Special Classes Statistics

The most complete and reliable source of information about the number of pupils in special schools and classes for exceptional children is the *Biennial Survey of Education, 1938-1940* (10). The 1936 report of 297,307 children enrolled in special day schools and classes of various types had increased to 313,722 by 1940. The number in residential schools had remained approximately equal to the earlier report with 71,458.

While this increase to 313,722 is an encouraging trend, it still represents only about one-tenth of the estimated number for whom some special educational adjustment should be made. The increases were noted in all types of the exceptional. Encouraging signs were also noted in secondary schools where earlier progress had been very slow.

It would be worthwhile to discover what are the important reasons why not more than one child in ten needing special services receives them. Inadequate knowledge of the problem upon the part of administrators, the trail of tradition, inadequate finance, and limited supply of trained teachers are probably among the most important factors.

### Costs and Finance

The higher costs of special education have always been a problem of practical administration consideration, particularly in years of depression, and generally mounting costs of all education. Reports of costs date back to the White House Conference of 1930 and earlier, showing from two to five times as high costs per special pupil as for normal children. In the survey of *Physically Handicapped Children in New York City* (9: 39-40) the annual per pupil cost in 1938 for all types of the physically handicapped was about \$246, whereas the cost per normal pupil was roughly \$150. These special costs ranged from about \$220 for open-air types to \$570 for the deaf.

A few states provide a state educational subsidy for certain types of handicapped children. There is no uniformity in this program among the various states, but generally there is more favorable consideration to the physically than to the mentally or socially handicapped. Factors which seem to decide what groups should be given special help are the particular enthusiasm of some individual engaged in educational work in a special field, such as the crippled; the influence of some community group operating on a state basis, such as a luncheon club; and some national organization representing a special group attempting to promote their program in as many states as possible. The Pepper-Boland Bill, which proposed to give a federal subsidy, was to have been limited only to the physically handicapped, altho the needs of the other groups are fully as great and should be as obvious.

### Vocational Guidance and Placement

The exceptional and the handicapped offer unusual problems of occupational guidance and placement because of handicaps and certain traditional attitudes against them in industry and business. It is necessary for the administration to give attention to this phase of education or otherwise little is likely to be accomplished. On account of the manpower shortage in the present war, many types of the handicapped are now finding opportunities for placement which had formerly been considered impossible. This practice may last beyond the present labor shortage.

Goldstein (5) reported that vocational guidance in a correctional institution is much more difficult than in the ordinary school. Psychiatric and psychological study are necessary and vocational guidance becomes a modified vocational psychiatry. Burnside (3) noted that unless early recognition is afforded to gifted children and suitable guidance is available, much val-

able talent will be lost for industry. Wallin (16) summarized reports from earlier studies to the effect that many feeble-minded and unstable individuals had performed surprisingly well and much beyond the expectation of their teachers and the diagnostic prognostications. He stated:

Indeed a handicap frequently is a blessing in disguise. It serves as a powerful incentive to overcome the defect or to develop compensatory substitute competencies. This resolution to vanquish a shortcoming may develop qualities of determination, enterprise, and resourcefulness that will carry the individual to greater heights of achievement than he ever would have reached without the handicap (16:333).

In the survey of physically handicapped children in New York City (9: 16-20) four phases of successful vocational adjustment were discussed: determination of individual ability, guidance, training, and placement.

The objectives of vocational training and the methods of attaining these objectives are similar for the physically impaired and the physically normal. Vocational guidance and placement, however, involve problems not present in the treatment of the normal. Exploratory and try-out courses constitute the best method of discovering an individual's interests, capacities, and limitations. The handicapped can often compensate by the ingenious use of residual abilities and can at times equal the standard performance of normal individuals. Handwork and occupational activities should be encouraged at the elementary-school level. A wide variety of shop and industrial arts experiences should be available on the junior high-school, academic, and vocational high-school levels. There are no rigid rules for determining job success in advance. Many physically handicapped persons have developed superior occupational skills, and many have achieved success in professional fields. A try-out on tasks involving the skills required in particular vocations constitutes the best test of vocational capacity.

This report continued further to the effect that carefully administered tests of various abilities and aptitudes are necessary, and that opportunities should be afforded in industry in spite of such obstacles as objectionable appearance, fear of higher compensation costs, fear of low quantity of production, and concern over plant harmony and efficiency.

### New York City's Survey of the Physically Handicapped

The most extensive survey of handicapped children was for the physically handicapped, authorized in 1936 by the New York City Board of Education, conducted in 1938-39, and published in a series of eleven reports appearing in 1941. These reports are as follows: *Physically Handicapped Children in New York City* (9); *Acoustically Handicapped Children; Cardiac Classes and the Care of Cardiac Children; Children with Speech Defects; Children with Tuberculosis; Epileptic Children; Open Air Classes and the Care of Below Par Children; Orthopedically Handicapped Children; Psychological Considerations in the Education of the Handicapped; The Education of Children in Hospitals and Convalescent Homes; and Visually Handicapped Children*.

The director of the studies was Harold McCormick. The various committees were composed mainly of physicians, but eventually about five

hundred people participated in the entire study, as well as twenty-one organizations—local, state, or national. The above list of reports gives the various types of children included in the study and embraced approximately 12,000 pupils. In addition, there were about 1400 on home teaching, and 1700 in hospitals and convalescent homes. An additional 28,000 children received training to improve their speech.

The guiding principle of the studies was to determine the need for special programs. Special programs were recommended for educational reasons in the case of the severely visually handicapped, the severely deafened, and the cerebral palsied, and for physical reasons in the case of the crippled, other than the cerebral palsied, the cardiac, the epileptic, and those whose physical status is below par.

### Conclusions of the New York Studies

Some of the important conclusions were:

The medical and educational programs for the physically handicapped which have developed in the public schools over a period of years are no longer in harmony with current medical and educational advances. Some fundamental changes are now necessary.

The physical condition of children is the primary factor determining necessary or desirable limitations of activity in any modified school program. The Department of Health should have on its staff consultant physicians qualified to assume responsibility for the medical supervision of all types of physically handicapped children. It should be the duty of the school physicians to interpret the recommendations of these consultants to the educational authorities. Ample information regarding individual needs of the children should be provided so that their educational programs may be intelligently planned. The school physicians should also be given responsibility for determining periodically the medical care status of children on modified school programs and under home-bound instruction.

Children's normal social development will be best promoted thru participation in as many of the customary activities of children as their physical condition indicates to be desirable. Only a small proportion of children able to attend school cannot engage in at least some activities with normal children. Substitute activities, to compensate for those denied by physical limitations, should be provided.

Handicapped children must be brought to an intelligent acceptance of their condition and care must be exercised to avoid the development of serious personality maladjustments.

The educational program for a physically handicapped child should be based upon a thoro knowledge of his mental and physical capacities and limitations. Accurate medical, educational, and psychological data regarding each individual must be secured before a plan for his educational care can be worked out intelligently. Social and economic back-

grounds must be considered in relation to probable permanent disability in planning for the future.

A well-rounded curriculum and modern teaching including vocational guidance, training, and placement methods are even more essential for the handicapped child than for the normal. Equal educational opportunity is denied the child who is taught only a curriculum stripped of all but its bare essentials and who is denied participation in group activities with children of his own age, as is now the case in some of the special classes for the physically handicapped.

The committee has found that open-air classes do not effectively meet the needs of physically below-par children, and recommended that they be abolished and the children in them be assigned to regular classes. It has proposed other means for meeting the needs of all below-par children.

The committee has found that the classes for cardiac children have not demonstrated their necessity during the more than twenty years that they have been in existence. A plan has been proposed for caring for these children, which if put into practice will greatly reduce the number of these classes, if not eliminate them altogether.

There are a considerable number of children in the School for the Deaf and at least one-fourth of the children in classes for crippled children who should be transferred to regular classes because their conditions do not warrant continuation in the special programs.

Such funds as are made available from services which the committee has recommended discontinuing should be reallocated to more effective uses. A larger supervisory personnel should be provided for the special educational programs recommended, and appropriate services made available for groups of children now being neglected. Additional psychiatric, psychological, and social service personnel is required to provide adequately for the adjustment of these children to school and to life. The medical and nursing personnel of the school health service must be increased if there is to be the effective medical supervision which is basic to the development of individualized school programs for physically handicapped children.

Responsibility for many present deficiencies is to be attributed to a failure to keep abreast of changing thought based upon medical and educational advances and to a lack of coordination of effort. To modernize the program and to coordinate the various aspects of the work it appears desirable to have the educational provisions for all groups of physically handicapped children placed under the administration of a single official, who is qualified for this position and who is assigned to devote full time to it. It should be the responsibility of this official not only to coordinate services within the Department of Education, but also to secure appropriate cooperation from other city departments, particularly the Department of Health, the Department of Hospitals, and the Department of Public Welfare.

A permanent medical and educational advisory committee to confer with the school authorities upon the program of physically handicapped children is desirable. Such a committee should be composed of pediatricians and physicians representing other specialized fields of medicine, educators specializing in the education of the several types of physically handicapped children, representatives of the departments of health, hospitals and welfare, and the administrative officers of the board of education responsible for the education of these children. Its purpose should be to assist in developing a program embodying the principles and recommendations made by this committee in its several reports. The advisory committee should also act as a reviewing body in the continuous appraisal of the program in the light of new medical knowledge and improved educational practices. This committee believes that the board of education should appoint such a permanent advisory committee to assist in developing the program for which its studies have laid the foundation.

#### Dissertations and References

For several years, Good (6) has tabulated the titles of doctor's dissertations reported either as Ph.D.'s or Ed.D.'s from many universities which responded to his request for information. Of 549 dissertations under way in 1942-1943 in education, twenty-six, or 4.7 percent dealt with exceptional children. Altho this number had increased from about 3 percent in the years from 1929-1935 it is still below the approximate 7 percent of the total school population who suffer from various types of handicaps.

The greatest number of dissertations dealing with any particular field were eight on behavior and mental hygiene, five on speech defects complicated by mental subnormality and physical conditions, four on educational failures, two on orthopedic conditions, and the remaining seven with one each upon other types of the exceptional. Columbia University and New York University each had eight of these dissertations, University of Michigan five, and Harvard three. In an earlier report by Good, about 4 percent of master's theses were on exceptional children.

For several years Hildreth and Ingram have prepared lists of selected references from the literature on exceptional children (8). Materials are concerned with subnormal backward, and dull-normal children; behavior and problem cases and dependent children; juvenile delinquency; superior and gifted children; blind and partially seeing children; crippled children; deaf and hard-of-hearing children; delicate children speech defectives; and general references. Approximately one hundred titles have been reported each year, with brief annotations, and the lists afford an economical source of new materials.

In the review period 1941-1943 no books on the general field of special education appeared, altho several were published in 1940. Baker's *Introduction to Exceptional Children* (2) appeared in January 1944.

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## CHAPTER III

### The Mentally Handicapped

JOHN A. HOCKETT

THIS CHAPTER CONTINUES THRU 1943 the summary presented by Cutts (7) for the five-year period ending in 1940. Considerably less research bearing on the education of mentally handicapped children was reported in the period 1941-1943 than in the five years covered in the previous summary, due undoubtedly to war influences as well as to the shorter interval.

#### Characteristics of the Mentally Retarded

Two recent books contain chapters summarizing current knowledge in this area. Baker (5) devoted a chapter to the slow-learning child and another to the mentally subnormal. Concepts of feeble-mindedness were presented by Stoddard (38). Wallin (44) reported on "Atypical children: Mental Defectives" in a recent encyclopedia. The social, mental, developmental, educational, constitutional, and etiological criteria of mental deficiency and implications of different concepts of this phenomenon were discussed by Doll (8). Lurie and others (22) compared the IQ's of 140 problem children with their social quotients as determined by the Vineland Social Maturity scale. They found that in general the SQ was appreciably lower than the IQ but that children of low IQ tended to compensate by developing a social maturation beyond their intellectual level. Valentiner (42) compared the fatigability of two groups aged ten to thirteen, with mean IQ of 65 and of 100. The mentally deficient were somewhat inferior in hand grip but not markedly more susceptible to muscular fatigue. In mental work such as color-naming and cancellation the mentally deficient performed at a lower level, with less accuracy, and fatigued more quickly. After following the speech patterns of ten low-grade feeble-minded children, Irwin (18) reached the conclusion that their developmental status in this area at four years of age approximates that of the normal child at less than one year.

#### Constancy of the IQ

Phillips (32), who personally administered an Australian revision of the Binet test two or more times to 365 pupils in a residential school, concluded that for children whose IQ's range from 50 to 80 there is a tendency for a general and substantial decline in IQ with repeated applications of the test. This decline he found symptomatic of a decline in rate of mental growth and early maturation since it varied directly with the length of the interval between tests. The decline in rate of growth was greater for those of low IQ, and environment was held to have an appreciable influence on IQ. Similar results were reported by Kvaraceus (20), who tested 144 pupils three times, with the interval between tests ranging from one to five

years. The median IQ's for the successive tests were 74.2, 73.5, 68.05. Skeels (35) reported the effect of placing thirteen orphanage children between the ages of one and two in a stimulating nursery-school environment for varied periods of time. He reported a mean IQ of 64 at the beginning and one of 92 at the end of the nursery-school experience. Thirty-three months later, a follow-up test showed a mean IQ of 96. The respective IQ's of the control group left in the unstimulating orphanage were 87, 60.5, 66.

### Problems Involved in the Education of the Mentally Retarded

The responsibility of the secondary school for adjusting its program to the needs of the mentally deficient has been stressed by several writers. Dooley (9) pointed out that since the elementary and junior high schools have revised their programs to meet the needs of this group, many dull pupils are entering senior high schools where they are unable to find suitable courses. Anderson (4) charged the high school with lack of understanding of the nature of prevocational and occupational training for these pupils and stressed the need for active and purposeful learning experiences and maximum pupil participation. That serious problems have been caused by the failure of the secondary school to recognize and meet the needs of the backward child was the contention of Stevens (36). The various problems involved in developing educational programs for slow learners were discussed by Featherstone (13). The extension of the special class movement was urged by Ellis (10), who holds the public school responsible for the prevocational, social, and occupational training of all well-adjusted higher-grade mentally deficient children whose presence is not detrimental to the best interests of normal children. Abel (1) used Piaget's storytelling and inquiry technic in securing the moral judgments of subnormal adolescent girls. She found that institutionalized girls evaluated problems involving punishment and justice with greater moral realism than noninstitutional girls, and recommended that the institutions give more emphasis to the development of moral judgment so that their pupils will have at least as socialized a point of view in this area as do their peers in the general community.

### Provisions for Special Education

The general provisions made for slow learners in 1055 junior and senior high schools were reported in a *Research Bulletin* (29). One-half to three-fourths of the schools provide individual coaching or remedial work, modified standards of achievement, separate classes, individualized work in regular classes, and repetition of subjects. Opinions of principals as to desirable adjustments for slow learners were also summarized. Separate classes are provided most frequently in English, mathematics, social studies, and science, and least commonly in physical education, art, and music. Bases used in selecting teachers for slow-learning classes were also set forth, as well as the modifications of curriculum and method made for such classes.

The scope and work of special classes for mentally retarded children in Los Angeles were described by Martin (24), who reported their academic achievement and the results of a survey of the personal and social adjustment of 374 pupils. Schmidt and Stone (34) made a similar report for Chicago, sketching the provisions for such pupils since 1899. In the "lower vocational centers" for boys and girls, in operation since 1938, ninety minutes a day are devoted to shop work and the remainder of the day to departmental academic classes.

Martens and Ingram (23) studied the programs of sixty-five public and eleven private schools for the mentally deficient, reporting two significant trends as follows: increasing efforts to provide optimum all-around development for each child and growing emphasis on the integration of school experiences with life. State teaching certificates were held by 46 percent of the teachers in these institutions, college degrees were possessed by 27 percent, and 14 percent had received special preservice training for their work. The median annual per capita cost for operation and maintenance of the institutions was \$291, but the proportion spent on the educational program could not be determined. A somewhat similar study was made by Hackbusch and others (16). They reported for forty-eight institutions that commitments to the institution were generally made by physicians, altho in seven states a "qualified" psychologist might act. Of sixty-eight public institutions, ten reported no psychological service, thirty-five reported one or more staff psychologists, and twenty-three reported the employment of outside persons as needed. Among the tests reported in use are the Binet, Pintner-Patterson, and Grace Arthur performance tests, various achievement tests, and the Vineland Social Maturity scale. In general, they state, the person admitted to an institution for the mentally deficient is given an intelligence test, one or more achievement tests, and a performance test. Bice and Graves (6) emphasized that satisfactory social relationships in the residential school are fostered by careful grouping according to social maturity rather than solely on the basis of age or IQ. They also stressed the importance of proper initial orientation, kindly guidance, challenging work, and the proper attitudes on the part of the whole staff.

### Curriculum and Methods

Abel and Kinder (2) pointed out the difficulties encountered by the subnormal adolescent girl in an abstract, verbal curriculum as well as the problem of stigma attached to assignment to special classes. They recommended four emphases in the school program: (a) appropriate mastery of the three Rs; (b) general school adjustment including peer status, right attitudes, and competence in self-control, and in performing daily tasks; (c) competence in skills, sports, and dancing; and (d) development of resources for constructive use of leisure thru esthetic and creative activities. Nash (28) described the four major divisions of the curriculum of the Vineland Training School as follows: (a) informal and formal education, especially reading, writing, and spelling; (b) manual and industrial train-

ing; (c) physical and musical education, music being the outstanding cultural subject; and (d) entertainment and recreational activities.

The outcomes of an adjusted program in a group of New York City high schools were compared with those of a group following the traditional Regents' program by Morse (27). Adjustment of the program did not affect the schools' holding power. The duller pupils liked the adjusted program better. Pupils in the Regents' schools scored higher on a test of traditional subjectmatter than on two attitudes tests.

Fried (14) described a plan involving the teaching of relaxation and provision of eight brief relaxation periods daily to reduce irritability and restlessness. Self-control and self-direction were also stressed. The therapeutic value of self-expression thru drawing for mental defectives was emphasized by Lowenfeld (21). The teaching of music in a special school for seriously retarded children was described by Stinson (37).

### Reading

A study by Richter and Parr (33) reported that eighty-seven out of 211 secondary schools in Oregon were attempting to meet the needs of retarded readers in 1940-41, but that responsibility for remedial instruction was generally in the hands of English teachers who had little or no special training for the work. A discussion of the diagnostic tests to use in differentiating poor reading ability from low mentality was presented by Nolan (30). Gates and Pritchard (15) reported a five-year experiment in teaching reading to slow-learning pupils. The experimental group pursued a type of activity program designed to meet the needs of the dull-normal, underprivileged children, which did not make reading the primary tool of learning. This group kept pace in reading ability with the control group which pursued a conventional program with major emphasis on reading, and excelled them in reading interests and in certain other desirable outcomes.

Strang (40) reported methods used in several high-school classes to improve the reading abilities of slow-learning children. She made such suggestions as firsthand experience is necessary to prevent verbalism; conversation improves vocabulary; the students' own dictated adventures are excellent material; the will to improve must be reinforced by specific help; social aspects of reading are important, as in a reading club. Vaughn (43) compared two groups of fourteen-year-old boys with a mean IQ of 64. The poor readers (reading grade 2.2) showed significantly more disinterest, overactivity, temper outbursts, and speech difficulties in academic classrooms than the good readers (reading grade 4.2). In handwork rooms where both groups could succeed, the differences in behavior disappeared.

Martinson (25), in a follow-up study of two groups of mental defectives who had been given remedial reading instruction, showed that those who returned to classrooms progressed as rapidly as their classmates, and that those who had discontinued formal instruction maintained the reading ability they had developed. A list of 250 books best liked by slow readers in

tenth-grade English classes over a ten-year period was presented by McAdow (26), who emphasized the enthusiasm of the slow child for material he could understand and enjoy. Another list for slow readers was contributed by Heyerdahl (17).

### Pupil Progress and Achievement

Data on pupils receiving special education in Detroit were provided by Engel (11). Of more than 3000 pupils who were unable to profit by regular schoolwork, half had IQ's below 70, and 92 percent had IQ's between 50 and 80. More pupils came from adequate than from poor homes. Annual academic gains were generally in direct ratio to the IQ and averaged two-fifths grade for all special class pupils. Over 70 percent of the pupils had physical defects which might contribute to their learning difficulties. Wallin (45) summarized the arguments for and against promotion of pupils by chronological age, irrespective of academic achievement, and the opinions of teachers regarding automatic promotion of retarded children. Engle (12) compared the teacher ratings on adjustment and personality of two groups of Z-section high-school pupils, one group of normal age, one overage. He concluded that where special help is given to pupils doing poor academic work, overage children may make as satisfactory personality adjustment as normal-age pupils of the same capacity.

Two follow-ups of pupils excluded from special public-school classes because of low IQ's were reported. One by Thompson (41) revealed the following distribution: 22 percent were back in public or private schools, 10 percent were institutionalized, 17 percent were employed at simple jobs, 37 percent were at home loafing or doing some work, and the remainder were not located. Jewell (19) reported that the majority were well adjusted in their homes and that social misconduct was not serious, but that a trained field worker was needed to help instruct parents in training defective children and to assist in solving family problems arising from their presence. Stone and Schmidt (39) reported the activities of 132 girls one-half to three years after leaving the lower vocational centers of Chicago. Two-thirds had voluntarily continued their education. One-third had obtained work as maids, sales clerks, wrappers, and the like, and were generally successful in their work and in spending their wages. The girls came from homes ranging from very wealthy to very poor, but two-thirds of their families were at the low subsistence level.

### Occupational Preparation and Placement

Allen (3) emphasized the special need of dull pupils for vocational guidance, since they are less likely than the average student to achieve their ambitions. They should be led to choose unskilled or semiskilled work. An occupational survey of students leaving subnormal classes in Hibbing, Minnesota, during a ten-year period was reported by Nolte (31). The large majority remained in school until sixteen, the compulsory school age, and a few until seventeen, and even eighteen. The majority found employment, while a small percentage remained at home.

### Needs for Further Research

One concludes a review of the research in the education of mentally-handicapped children during the past three years with the conviction that only very modest progress has been made during this war period in attacking the many complex problems demanding solution in this extensive and important area. The statement of needed research presented by Cutts (7) three years ago is as valid today as then, and need not be repeated here.

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## CHAPTER IV

### The Mentally Gifted

ELIZABETH L. WOODS

THE LAST NUMBER of the REVIEW OF EDUCATIONAL RESEARCH to include a chapter on the mentally gifted was published June 1941. It was prepared by Newland (16), who reviewed ninety-one references dated from 1930 thru 1940. The titles reviewed in this number include those published in 1941, 1942, and 1943, except for the inclusion of three 1940 titles which do not appear in the 1941 REVIEW.

#### Social and Emotional Adjustments

McGehee and Lewis (12) presented a comparison of personality traits (as measured by the B.P.C. Personal Inventory) of two contrasting groups—the highest and the lowest 10 percent of 50,000 school children (as measured with Kuhlmann-Anderson Group Intelligence Tests). Statistically reliable differences appear, as follows: (a) more desirable traits are found among the mentally superior; (b) more undesirable traits are found among the mentally retarded.

Lewis (11) reported an investigation of the adjustment difficulties of children having IQ's above 145 as contrasted with children whose IQ's range from 125 to 145. Kuhlmann-Anderson Group Tests were used. Out of 45,000 elementary-school children tested, 930 subjects were found in the 125-144 group and fifty subjects in the 145 and above group. The socio-economic ratings showed that these children can be expected in all kinds of homes, altho they tend to come from homes which have slightly higher than average ratings. Ten of the fifty with very high intelligence came from homes of poverty. Greater maladjustment was found in the higher IQ group. Two of the fifty highest were rated "dull" or "mentally sluggish" by their teachers.

The group above 145 were achieving *below* their ability to a much greater extent than the group from 125 to 144. The author concluded that we are neglecting our most able.

#### Personalities, Interests, and Socio-Economic Status

McGehee and Lewis (13) compared the personalities, interests, and socio-economic status of the upper 10 percent (4529 children) of 45,000 children in 455 schools in thirty-six states. All were given the Unit Scales of Attainment and divided into two groups: those one or more years accelerated and those one or more years retarded in school subject attainment. Of these, 1078 were found accelerated and 756 retarded. These children were then rated by teachers on seventy personality traits, which had been rated by mental hygienists as to their importance for mental health. Each of the eight traits given highest placement by the mental hygienists were ascribed more frequently to the accelerated group than to the retarded.

McGehee and Lewis (14) presented evidence in support of their conviction that most investigators, relying too much on median scores on intelligence tests, have overemphasized the relationship of intelligence to economic level. They emphasized the necessity of noting the negative as well as the affirmative evidence in this relationship. The data of this research included the intelligence levels of 45,000 children. The mentally superior of this group represented the upper 10 percent as rated on the Kuhlmann-Anderson tests. Occupational rank of parents were available for 4176 children in this group, and on socio-economic status for 3571 of the retarded subjects.

The results clearly demonstrated that while a positive relationship exists where groups are considered, superior and retarded children are found in numbers at all levels. Eight percent of the superior group rated "poor" in socio-economic level while 5.9 percent rated superior, 55 percent average-superior, and 53.4 percent average.

Davidson (5) wished to determine whether children of approximately the same intellectual level are subject to the same set of influences because of different economic backgrounds. She chose a group of very bright children. Their personalities were studied by means of the Rorschach Method, the PEA Scale of Beliefs, and four other instruments. Two major conclusions were cited: these very bright children showed as great differences in personality as would be expected in an unselected group, and there is very little relationship between socio-economic background as measured by income and certain aspects of personality. The author conceded that more extremes of differences in income may be required in order to show significant influences on personality structure.

#### Case and Small-Group Intensive Studies

Conklin (3) studied sixty-two failing pupils, ranging in IQ from 130 to 163, in comparison with a nonfailing group of sixty-seven pupils whose IQ range was 130 to 157. The case-study method was employed and data collected on each child concerning nativity of parents and grandparents, recency of immigration (if not native-born), language spoken at home, socio-economic status, neighborhood environment, health, scholastic record, recreation, travel, personality pattern, and social adjustment. Because of the overlapping of 80.72 percent in the categories studied, the author concluded that some "factor of competence" is more important for adjustment than is intelligence.

Hollingworth (7) analyzed the mentality, personality, and school experience of twelve highly intelligent children. The studies began as early as the sixth and eighth years of their lives and were continued for some sixteen years. The scholastic achievement of these children was so high that they were continuous school problems. Where the adjustment was good, the parents had sought help and often special schools. The best adjustments came about when only a part of the child's time was devoted to the established curriculum. About one-third of these children showed marked creative ability, while another third had creative talents in a moderate degree.

Peppard (17) reported on children in slow and bright groups as seen by the mental hygienist. His experience confirmed the findings of others, that gifted children have better adjusted personalities than do others.

### Contrast Studies

Laycock and Clark (9) contrasted performance on the Revised Stanford-Binet Scale of Intelligence of two groups of forty children each, matched for mental age, one group comprising young-bright, and the other old-dull children. No statistically significant differences were found, tho there were indications that the old-dull do better on items requiring reproduction, while the young-bright do better on items "highly educative."

Conklin (3) contrasted sixty-two failing with sixty-seven nonfailing pupils, all of superior mentality. (See Section III of this report.)

Lewis (11) contrasted adjustment difficulties in two gifted groups, one ranging above, and the other below 145. (See Section I of this report.)

McGehee and Lewis (12) contrasted personality characteristics of mentally superior and mentally retarded children. (See Section I of this report.)

McGehee and Lewis (13) contrasted the personalities, interests, and home backgrounds of accelerated and retarded children. (See Section II of this report.)

Lewis and McGehee (10), contrasting the interests of mentally superior and of retarded children, made a statistical study of the extracurriculum activities and hobbies of the top and of the lowest 10 percent of 45,000 school children. Their evidence led them to conclude that "the schools are failing in their duty to superior children insofar as they are not socializing them to the degree that might be expected."

### Hobbies and Special Gifts

Boynton (2) reported on the relationship between children's tested intelligence and their hobby participation. In both sexes the hobbies of collecting, playing musical instruments, and reading history, science, and biography were participated in more often by children of superior intelligence. Very superior children showed a greater diversity in hobby interests than did inferior ones, and they engaged in these hobbies with greater frequency.

Courvoisier (4) studied the musical ability of 240 children of superior mentality selected from 3660 sixth graders about to enter seventh grade, all of whom were given a musical achievement test—the Strouse Music Test, Form B. Sixty-eight children reached the ninetieth percentile on all three tests. This group was given intelligence tests which proved them high in general ability. A follow-up study of this group was made to determine whether or not the pupils were stimulated sufficiently by their school programs to work up to their own highest levels of achievement. The author concluded that "these children, highly gifted in music and of high mentality, are not, and cannot be adequately challenged by their present opportunities."

### Educational Achievement of Superior Children

Musselman (15) studied 297 cases (IQ 120 or above) of boys and girls in the high schools of Baltimore in an endeavor to ascertain why pupils of superior intelligence often fail or do mediocre work in school. Achievement tests, personality tests, and home backgrounds ratings were used. Results showed the usual lag between ability and performance. The author suggested that research to identify and study some group of factors associated with or comprising "drive" is needed; also, further study of ways in which schools may make better provision for the intellectually superior child.

Conklin (3) studied sixty-two failing children whose IQ's ranged from 130 to 163. (See Section III of this report.)

Baker (1) devoted a chapter of his latest book to the mentally gifted. He reviewed and discussed briefly some of the more important research studies in this field and related the findings to his own experience with rapid-learning children in the schools of Detroit. He found ample warrant for grouping intellectually superior pupils together and making special provision for their education thru enrichment of their school program. He referred to Sumption's follow-up study of "major work" class children in Columbus as conclusive supporting evidence. (See Section VIII of this report.)

### Studies of Superior Negro Children

Jenkins (8) reported on sixteen cases of Negro children with IQ's of 150 or above. The number of these highly intelligent Negro children already located (in spite of the fact that the majority of Negro children live in communities or go to schools where there are no facilities for identifying highly gifted children) is evidence of the fact that "an appreciable number of Negro children of extremely high IQ are to be found." These cases will be followed and their life careers studied.

Theman and Witty (21) reported case studies and genetic records of two gifted Negroes. The authors have followed the career of "B," a gifted Negro girl (IQ 200), since the study of her, reported by Witty and Jenkins, in the *Journal of Social Psychology* in 1935. A case new to the literature was presented. "E," a gifted Negro boy, rated an IQ of 169, and was a well-adjusted, likable personality. He received his A.B. from the University of Chicago at age sixteen years, eight months, was an honor student, and was elected to Phi Beta Kappa. In 1941 he received his master's degree, and was elected to Sigma Xi in 1942. In August of 1942, at the age of eighteen years, ten months, he completed his work for the doctor's degree.

The same authors (22) reported a follow-up study of the educational attainment of mentally superior Negro children. One hundred and three Negro children with mean IQ of 148.9 were studied in 1934 and in 1940 as to educational achievement. The educational attainment of these superior Negro youth as measured by teachers' marks and rank in graduation class was similar to that reported for superior white boys and girls.

### Follow-Up Studies

Hollingworth (7) followed and studied twelve highly intelligent children for some sixteen years. (See Section III of this report.)

Witty and Theman (22) reported follow-up study of the educational attainment of 103 Negro children. (See Section VII of this report.)

Sumption (19) made a follow-up investigation of persons who as school pupils in Columbus, Ohio, had been in special classes for children of 120 IQ or above, known as major work classes. Seventeen years had elapsed since the first class was organized. A control group was used for comparison. The totaled results showed significant differences (all in favor of persons who had been in the major work classes) in the following: social responsibility, leadership, honors and awards, individual aptitude (hobbies, talents), ambition regarding vocational career, critical thinking (slight but positive advantage), reading of nonfiction books and professional magazines, numbers going on to college and numbers achieving professional careers. Terman (20) gave "a few highlights" on the present status of his follow-up of 1425 children studied in his extensive research on gifted children, which began approximately twenty years earlier. The 1940 study presented data on vital statistics, intelligence of offspring, marital adjustment, stability of IQ, and individual achievement, as well as on occupational status and income. The vocational successes of these highly intelligent individuals were found to be definitely superior to that of the average run of the population. This study presented an attempt made to determine the causes of successes and of failures, when such existed. In a study of the records of six hundred of the men, by three psychologists working independently, the two most significant causes of success seemed to be home background, emotional stability, and various personality traits.

### Constancy of IQ

Street (18) reported a study in which 1381 exceptional children (mental and physical deviates) were tested with the Stanford-Binet, or with the Terman-Merrill revision, beginning in 1931. Of these children, 920 have been retested at least once. Of the forty-three who showed changes in IQ of ten points or more, fourteen were mentally superior children.

Hildreth (6) examined the data on retests of children rating 130 IQ and above, in a private school of highly selected population. Some of these children had had one or more retests on the 1916 revision, and one or more retests on the 1937 revision. A smaller group had had two or more retests on the 1937 revision. The test intervals ranged from one to ten years. The changes found were considerable, and led her to conclude that in order to determine the mental status of presumably gifted children, safer practice would entail (a) obtaining successive ratings several years apart, and (b) supplementing Binet ratings with developmental and observational data.

### Needed Research on Mentally Gifted Children

Interest in the mentalities, personal characteristics, academic achievement, social adjustment, and life success of gifted individuals is continuously in evidence, both in popular writing and in research studies, but the problem, especially as it concerns the school's duty and magnificent opportunity in relation to gifted children, is far from solved.

It would seem that we already have sufficient evidence to convince the most complacent that children of superior intelligence are not being challenged by traditional school curriculums and traditional teaching methods. In a time when world events call, as never before, for the leadership of men and women who can sift ideas, challenge tradition, relate historical to current events, analyze prejudice and propaganda, and lead in movements for the improvement of local, national, and world government and relationships, it becomes imperative that we provide suitable, stimulating training for our most able children and youths.

We need additional research to determine the best ways of identifying all our gifted children early. Too few schools are even making the attempt in any systematic way. Still fewer are making special provision for their learning. We need more research on the best methods of securing enriched, challenging programs of study for our ablest pupils. We need research on the sources and causes of prejudice, even among our highly intelligent citizens, against peoples of other races, religions, and cultural mores. We need research on the best means of establishing understanding relations with our parents and other patrons, so that we may understand their wishes and work with them in the interests of their children. This need is nowhere more acute than with the parents of gifted children. We need more research into the causes and treatment of social maladjustment and various neurotic disturbances which mar the happiness and efficiency of some of our most highly endowed.

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## CHAPTER V

### The Socially Maladjusted

J. HAROLD WILLIAMS

THIS CHAPTER is patterned after the corresponding presentation in the REVIEW for June 1941, and includes researches made available during the intervening three-year period. The general trend of investigations has continued in much the same manner as those previously reported, altho the emphasis has shifted somewhat in the direction of community control of delinquency, with special emphasis on conditions brought about by the war. Productivity of research in social maladjustment in all its phases appears to be increasing in amount and quality.

#### General Sources of Literature

In a comprehensive treatment Carr (11) presented the practical aspects of juvenile delinquency, illustrated how various degrees of delinquency may be identified and dealt with, and reported factual data from the files of the Michigan Child Guidance Clinic. Reckless (57) prepared a report under the auspices of the Social Science Research Council, including an evaluation of research in the etiology of delinquent and criminal behavior, and a plan for further research. Barnes and Teeters (5) included problems of delinquency in a volume on criminology in general. Baker (4) devoted one chapter to behavior adjustments in a book on exceptional children. Thurston (69) discussed juvenile delinquency from the viewpoint of the probation officer, citing incidents of delinquent behavior in many cities. A detailed account of one type of offense was incorporated in a volume by Doshay (15). An investigation of separate behavior traits and their interrelationship was reported by Ackerson (1) in a second volume of the Behavior Research Fund series. The data are largely statistical in character, and show in tabular form the significant relationships among more than one hundred behavior traits, and their correlations with numerous physical and environmental factors. Another trait analysis was made by Hart and his associates (30). Probably the most significant book of the period, and one which is likely to be of considerable influence, is the volume by Shaw and others (62) who brought up to date the "delinquency area" studies, improved the technic, and gave new results of its application. The book includes 107 maps and 118 tables relating to population and delinquency rates in 121 American cities. Metfessel and Lovell (45) reviewed ninety-six titles on individual correlates of crime, including many which involved juvenile behavior, and considered the findings in the light of the multiple causation theory.

#### Extent and Distribution

Several community surveys of juvenile delinquency were made available. Caldwell (10) gave statistics for each county and group of counties in Wis-

consin. Carr (11) reported on the extent and distribution of behavior problems in Michigan. Chute (12) cited statistics for the period 1940 to 1942 from many cities and counties in the United States. Reed (58) reported data for an Ohio county. Smith (64) published a survey of juvenile delinquency on the Hawaiian island of Maui.

### Symptoms of Social Maladjustment

Types of behavior and its mechanism were analyzed by Baker (4), who also considered causes and various methods of diagnosis. In a volume dealing with personality problems in general, Young (79) reported on the personality of delinquent children and factors related to their maladjustment. The statistics presented by Ackerson (1) were derived from the study of 5000 children at the Illinois Institute for Juvenile Research. Consideration was given to types of offenses which could be identified for correlation purposes, and to the relation of these traits to total adjustment. Curran and Deibel (13) obtained statistical data on 1626 first admissions to the adolescent ward of Bellevue Hospital during a three-year period, with special reference to types of delinquency. Lowrey (43) presented statistical data on 2756 runaways. Hart and his associates (30), by means of factor analysis, found twenty-five significant traits in 300 delinquent boys, and determined six behavior factors: temper-assault, general compensatory behavior, aggressiveness, leadership, street-gang activity, and group stealing.

Two investigations sought symptoms of maladjustment in reactions to pictures. Eberhart (18) reported the results of a paired-comparison experiment in which elementary-school boys judged the relative seriousness of offenses represented in line drawings. England (21) secured, from delinquent and nondelinquent children, drawings representing the most important events in their lives. Maladjusted children expressed themselves to a greater degree than did the normal public-school children, the retarded, or the feeble-minded, but there were no significant differences in the percentage of unpleasant experiences pictured.

An activity-interview technic was reported by Gardner and Wollan (24) to be an effective check on impressions gained thru the usual verbal accounts which delinquent boys gave concerning their conduct and problems. Harris (28) gave results of a play activities blank which discriminated sharply between delinquent and nondelinquent boys. Durea and Heston (17) were able to identify problem boys with interest-attitude tests. The study of Doshey (15) charted the salient factors which produce the boy sex-offender and determine his later career. The data, derived from extensive court records, suggest objective criteria for the prediction of adult outcomes in these cases. Patterson (54) made psychiatric studies of juveniles involved in homicides.

### Physical Factors

Several studies suggest possible relationships between specific physical conditions and social maladjustment. Lurie and Levy (44) concluded,

from analysis of medical histories of five hundred problem children, that early pertussis (whooping-cough) may lead to serious behavior problems. Michaels (46) reviewed investigations of persistent enuresis in children, and found parallels between this condition and delinquency. A study by Jenkins and Crudim (33) of behavior problems in children with syphilis resulted in the suggestion that juvenile paresis, as a result of this disease, makes no significant contribution to maladjustment. Electroencephalographic studies (9, 35) indicated that these records may be of diagnostic value in the study of problem children. Lourie (42) analyzed twenty cases of alcoholism in children five to fifteen years of age. Hentig (32) found Negro delinquent girls to have relatively high susceptibility to organic and mental disease. Various investigators, according to Metfessel and Lovell (45), agree that there is no distinct physical type associated with delinquency.

### Mental Factors

Tests of intelligence continue to yield varying, but helpful, results with maladjusted children. Springer (65) compared Kent Oral Emergency and Stanford-Binet findings in a group of male delinquents in the sixteen- to eighteen-year age range. Rorschach tests of delinquents were reported (20, 38, 80) to be of apparent significance, while another group (73) found the Weschler-Bellevue tests to agree substantially with the revised Stanford-Binet in a study of delinquents and problem children. Metfessel and Lovell (45) thus stated their conclusions after analyzing numerous studies dealing with intelligence as a possible correlate of criminal and delinquent behavior:

When factors are made specific and subject to rigorous scrutiny less assurance is shown that any given one is significantly related to crime. On this account, intelligence as a factor probably is underevaluated, and vaguer concepts, such as "bad parents," probably are overevaluated (45: 153).

Several studies of attitudes were made. In one study (47) three of Thurston's scales were administered to delinquent and nondelinquent girls, with the result that the delinquents showed more favorable attitudes toward Sunday observance and the Bible, and no significant difference in attitude toward war. The same writers (48) compared delinquent and nondelinquent boys in attitudes toward patriotism, war, the Constitution, and Germans. The obtained differences were small. Another study (49) compared delinquent and nondelinquent boys and girls in the ninth and tenth grades in attitudes toward the law, God, and the church. Delinquent girls showed more favorable attitudes than nondelinquent girls on all three scales. Boynton and Walsworth (8) found "an amazing lack of difference" between delinquent and nondelinquent girls in emotionality test scores. In this study the Rorschach tests were reported to be of little value in differentiating the two groups. Durea and Fertman (16) found the

emotional maturity of delinquent girls to compare unfavorably with norms for nondelinquents.

Creative potentials in poetry and dramatics on the part of defective delinquents were explored by Owens (52, 53) with the finding that such potentials exist to a degree which might be useful in a training program.

Watts (71) reported that Negro delinquent boys do not differ significantly from nondelinquent Negro boys in responses to tests of problem-behavior, emotional stability, and social maturity. There were differences, however, in interests, habits, and some attitudes.

### Social and Economic Factors

Increased attention has been given to social and economic factors in child maladjustment, particularly those relating to the home, the community, and changed conditions of living, working, and earning. Hart and Axelrad (29) contrasted only-child delinquents with those from large families, and found the former to be significantly more often emotionally unstable, overaggressive, seclusive, and subject to lying and running away. Stott (67) obtained questionnaire replies from 649 farm, 639 small town, and 545 city adolescent boys and girls, concerning items of parental behavior which they disliked. Scolding, being kept at home, and slapping were the most frequent forms of punishment, and mothers did nearly two-thirds of the punishing. Children in rural homes appeared to be better trained than urban children in acceptance of parental control.

Zucker (81) employed a story completion test to compare delinquent and nondelinquent boys (equated for age, intelligence, and socio-economic status) in emotional attachment to parents. The delinquents indicated a preference for friends over parents when in need of help, and more often rejected parental advice against stealing. In general, the attachment to parents appeared to be weak in the maladjusted. Lander (39) found incompatibility, rejection, instability, and defective social adjustment in the parents of a large proportion of a group of delinquent boys. These conditions were such that the author believed no case work or psychiatric treatment would have altered the parents sufficiently to bring about normal environments for their children. Strauss (68) reported a detailed case study of a delinquent boy, fourteen years of age and of high IQ, whose maladjustment was attributed to faulty management on the part of the grandmother. The study by Watts (71) indicated that parental control is especially weak in the backgrounds of Negro delinquents.

Community factors were presented in detail by Carr (11), Shaw (62), and many others. Weeks (72) made a comparative study of social backgrounds of 420 delinquents with those of an equal number of high-school pupils, finding fourteen items which differentiated the two groups. The most effective of these were school advancement, length of time in country, home ownership, parental education and occupation, and the home situation. It was suggested that the method might be employed in the prediction of delinquency.

An original approach to the study of maladjustment, with special reference to the significance of social and economic status, was made by Porterfield (56), who compared the misdeeds of a group of college students with the offenses for which delinquent boys were taken into custody. The college students appeared less often in court, and their experiences seemed less damaging to their subsequent careers. The court child was found to be typically from a socially unimportant family, and friendless, while the college student, who behaved in much the same way, had to his advantage the support of family and friends. Odoroff and Harris (51) compared the interests and attitudes of delinquent boys with those of nondelinquents from unselected communities and delinquency areas. The results indicated that delinquent boys in these respects are more like nondelinquents from a similar background than delinquents are like unselected boys. Reed (58) attributed a marked increase in delinquency in an Ohio county to adverse social conditions and inadequate relief during the depression period.

Relatively high rates of delinquency among Negroes were reported by Blanshard (6), whose findings suggested poverty as the most important contributing factor; and Hentig (32), who attributed the high rates in Negro girls to the density of Negro population in delinquency areas, instability of residence, broken marriages, and the unfavorable attitude toward Negroes of many law-enforcing agencies. On the other hand, Watts (71), in comparing two groups of adolescent Negroes, one delinquent and one nondelinquent, was unable to find adequate explanation in economic, social, or environmental factors.

On the much-discussed effect of the war on child maladjustment there are some facts and varying interpretations. Davis (14) presented a number of children's clinic cases which seemed to reveal definite effects of wartime parental insecurity. Glueck (25) found delinquency in England to have increased, seemingly, in consequence of wartime lessening of normal controls. These effects were especially noticeable in children of borderline intelligence. The British Information Services were quoted (37) as finding an increase of 33 percent in the number of children eight to sixteen years of age who were charged with indictable offenses during the first year of the war, as compared with the previous year of peace, and continued high rates up to December 1941. Thereafter, a decline was observed. Winsor (76) analyzed conditions in the United States, and concluded that much of the delinquency increase arises from the manner in which communities react to the war situation. The most extensive statistics were gathered by Chute (12) from a large number of cities, counties, and smaller communities thruout the United States. Figures for all groups indicate an increase in juvenile delinquency of 16.6 percent from 1940 to 1942, with the rate for girls increasing more rapidly than that for boys. Changes did not appear to be related to war production, size of community, or geographical area. Cases from thirty-two child guidance clinics in Massachusetts were found by Gardner (23) to show an increase from 1941 to 1942, but this was attributed chiefly to better understanding

on the part of parents, school officials, and social workers, and hence a tendency to refer more cases for consideration.

### School Conditions

That provision for public education may be a factor in juvenile delinquency was suggested by Edmiston and Swaim (19) who obtained data from forty-two cities. The delinquency rate (average number of cases per 1000 population) was found to be negatively correlated with the number of days school was in session ( $r = -.40$ ), and with average expenditure per pupil ( $r = -.39$ ). Correlations between these variables in the different cities ranged from  $-.16$  to  $-.98$ . Blau and Veo (7) described the program of a New York public school devoted entirely to the education and guidance of problem boys, based on the usual classroom technics combined with individual attention, activity procedures, and mental hygiene services. Case studies were given to illustrate the favorable results obtained.

### Courts and Institutions

Historical and legal aspects of juvenile court procedure were presented by Thurston (69) with special reference to the problems of the probation office. Gardner and Wollan (24) described a new treatment program developed in the Boston juvenile court. Selling (60) studied one hundred juvenile traffic offenders, and found treatment needs similar to those applicable to other behavior cases.

Researches in problems of institution organization and management are becoming more objective. Some of these deal with measures of adjustment to institution training. Habbe (26) gave questionnaire results on treatment programs in seventy training schools. Steel (66) made a nine-month study of the tangible results of a cottage management plan in a school for girls. Topping (70) studied institution boys who were subject to violent behavior. Fauquier and Gilchrist (22) identified the leaders and followers in an institution for problem boys, and found the leaders to be taller, heavier, lower in misconduct count, and *lower in intelligence* than their followers. Jennings (36) identified factors of leadership and isolation in an institution for problem girls. The factors proved to be products of interpersonal interaction, rather than attributes within persons. As a method of facilitating conformity to institution rules, Newkirk (50) found posthypnotic suggestion, combined with psychotherapy, to be of value. Parole prediction literature was reviewed by Allen (2) who observed that the major factors usually considered are in the pre-parole history, rather than in the situation to which the applicant is paroled. Jenkins and others (34), on the basis of clinicians' judgments of positive and negative weightings of case history elements, obtained scores which, with some overlapping, distinguished between successful and unsuccessful juvenile parolees.

The value of the Borstal system, a widely-heralded method developed in Great Britain for the treatment of young offenders, was considered by Healy and Alper (31) in a volume prepared after three trips of inspection. The

history and development of these institutions, methods of training and supervision, and statistics on results were presented in detail.

Argow (3) studied research methods employed in 112 schools for delinquents, and listed research studies emanating from these institutions. Suggestions were given for the development of research activities, and their importance to institution management was emphasized. Problems suitable for research were outlined.

### Prevention of Delinquency

Altho child guidance clinics are recognized as being important elements in delinquency prevention, there has been little objective evidence of their effectiveness. A study by Witmer and Keller (77) indicated that in the long run, a large proportion of maladjusted children outgrow their problems, with the result that those not receiving the benefit of child guidance do about as well as those who were treated with apparent success. However, child guidance was judged to be an effective method of relieving distress and unhappiness during the period of maladjustment.

Emphasis in many studies and reports is being placed on organized community efforts as being most likely to bring about tangible results in the prevention of maladjustment. Shanas and Dunning (61), in a factual analysis of the reactional activities of 15,000 boys and 8000 girls between the ages of ten and seventeen years, found that participation in supervised recreation reduced delinquency as measured by percentage of recidivism. Delinquents were reported to attend movies more often than nondelinquents. Carr (11) and Slawson (63) proposed plans of community organization and social action in the control of delinquency. Lenroot (40) described an experimental program sponsored by the United States Children's Bureau, based on early identification of maladjustment and the integration of social and welfare agencies. Glueck (25) appraised community organization in England and found suggestions for meeting needs in the United States.

The public-school system is in a position to do vastly more than it has yet done toward the prevention of juvenile delinquency, according to an analysis by Lloyd-Jones (41) who pointed out that the schools have all the recommended resources, such as playgrounds, gymnasiums, heated and lighted rooms, seats, tables, auditoriums, lunchrooms, sanitary facilities, studios, music rooms, motion picture equipment, phonographs, public address systems, laboratories, workshops, and libraries. What appears to be needed is a plan for the more generous use of these resources in a co-ordinated community effort to develop citizenship.

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## CHAPTER VI

### The Auditorily and Speech Handicapped

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WITH FEW EXCEPTIONS reference is limited in this review to publications that have appeared since the publication, in 1941, of a review similar to the present one, prepared by Ingram, Pintner, and Stinchfield-Hawk (52).

#### I. The Speech Handicapped

##### Incidence of Speech Defects

Estimates of the number of speech defectives in the public schools of the United States vary according to the definitions employed and the survey methods used. School surveys made prior to 1941 yielded findings ranging from approximately 3 to 20 percent of the school population classified as defective in speech, with the mean falling between 10 and 13 percent. These approximate figures have in general been corroborated by the more recent studies. Burdin (22) reported slightly over 6 percent of 3602 pupils in Grades I to IV in Indianapolis as defective in speech. In 1942 Mills and Streit (80) reported a survey of 4685 children in the Holyoke, Massachusetts, public schools; of this number they classified 10.1 percent as speech defectives. For the first three grades, however, the percentage was 33.4 of approximately 1200 children tested. The authors pointed out that "a large percentage of the articulatory defects in the younger children will disappear with the maturation process." In a study of 9448 pupils in the public and parochial schools of Superior, Wisconsin, and surrounding Douglas County, Young (117) found 10.5 percent to have defective speech. Of about 30,000 children tested individually in the Iowa remedial education survey (60), approximately 10 percent were judged to have defective speech.

A somewhat different type of speech survey was reported in 1942 by Roe and Milisen (95). They gave individual tests of speech sound articulation to 1989 children in Grades I thru VI in public schools of nine Indiana cities. No attempt was made to classify any child as a speech defective; findings were reported in terms of the number and types of articulation errors on a test in which sixty-six errors were possible. The number of errors per child ranged from zero to fifty-three; the mean number per child ranged from 13.6 in Grade I to 7.01 in Grade IV. The percentage of children making some error, regardless of type, ranged from zero (*ng* sound) to 91.2 percent of the first-grade children who erred in articulating the sound of *j* as in *judge*. In general, articulation improved from grade to grade, altho these children were not receiving speech correction. The most marked improvement was noted as between the first and second grades; above the fourth-grade level there was little change.

with the average child in the sixth grade making about eight errors, approximately the number made by the average child in the fourth grade.

Striking an approximate average estimate at 10 percent, it would be concluded that about 3,500,000 American school children are defective in speech. Of these, to judge by studies published by the Division of Speech Improvement, New York City Board of Education, 1939-40 (84), Burdin (22), Mills and Streit (80), Phelps and Turner (87), and reports of Berry and Eisenson (13), and Pintner, Eisenson, and Stanton (88), it is to be reasonably estimated that the various types of defective speech are to be found with the following approximate frequencies: functional articulatory defects (no causal organic conditions), 2,000,000 children; stuttering (stammering), 350,000; voice disorders, 200,000; voice and articulation disorders associated with hearing deficiency, 325,000; speech defects associated with cerebral palsy (spasticity, ataxia, and athetosis), 65,000; speech defects associated with cleft palate and harelip, 5000. The frequency of other disorders cannot be estimated because of the varying definitions employed.

### Sex Differences

In general, there are more boys than girls with defective speech. For simple articulatory disorders, this ratio, as reported, ranges from 2.3: 1 to 1.09: 1 (95). For stuttering, the ratio ranges from 2: 1 to 10: 1, depending upon the age level, the ratio increasing with age, and upon other factors which vary from one survey to another. Generally speaking, the ratio is about four or five boys to one girl, according to estimates published by Bender (12) and Mills and Streit (80). In about two out of every thousand births a cleft palate occurs, and the sex ratio is approximately 1.1 boys to every girl (80).

### Intelligence

Speech defects are found at all intelligence levels. However, among children of subnormal mentality, speech defects are relatively more common than among children average or above in mental ability. In 1942, Bangs (9) made a detailed phonetic analysis of the speech of fifty-three primary aments, or feeble-minded children, in the Western State Custodial School, Medical Lake, Washington. Organic cases were excluded. Findings were compared with data from normal children. Bangs concluded:

The data suggest, in general, that the speech of the primary ament displays the same tendency toward retardation which is characteristically noted in other functions of the primary ament. Aside from more frequent omission of final sounds, the articulatory speech defects of the primary aments do not differ qualitatively to any marked degree from the defects which might be found in children whose intelligence falls within the normal range.

Bangs noted the commonly reported tendency of the mentally retarded to present both a much greater frequency of speech defects and a markedly

greater variability or inconsistency in articulatory errors than are to be observed in children at normal intelligence levels.

General surveys made in public schools give a different, and for most practical purposes, a more significant picture with regard to the relationship between speech defects and intelligence. A median IQ of 97.7 was reported by Burdin (22) for speech defective children in the primary grades of Indianapolis schools. Morris (82) reported a mean IQ of 102.4 for 104 pupils with speech and voice defects in Grades III to VII in the Laboratory School of Indiana State Teachers College.

The distribution of intelligence test scores of stutters tends to be normal, with the mean falling at or near an IQ of 100, according to several reports published prior to 1941. Steer (101) found the mean IQ (Otis) of college and university stutters to be 116.5, 4.5 to 6.5 points above the mean of 110 to 112 for college students as given by Otis. Johnson (58), using the Otis Self-Administering Test of Mental Ability, found the mean IQ of elementary-school stutters to be 100.7 with a mean for those of high-school age of 100.75, and for those enrolled in college 120.84; forty-four cases were tested. In general, defective speech is not to be taken as evidence of mental deficiency by any means, even tho it does tend to be the case that mental deficiency is frequently associated with defective speech. The general run of public-school speech defectives are not mentally subnormal; the majority are average or above in intelligence. Stuttering, certainly, and the more common articulatory defects, such as the *s* lisp, are not to be accounted for on the basis of intelligence. Most public-school speech defectives are no less educable than are school children generally.

It would appear, on the basis of studies made before 1941, that speech defectives tend to be somewhat more retarded scholastically than their mean intelligence level would warrant. The reasons are probably to be found in their difficulties in oral recitation and in the tendency of some teachers to overgeneralize from defective speech to a judgment in terms of general defectiveness, according to studies by Johnson (58) and Knudson (71). In a more recent study, however, Lee (74) found no significant scholastic retardation among children with functional articulatory defects in a survey of three Iowa counties.

### Speech Correction in Public Schools

As has been pointed out by Strother (104), speech correction in the United States has been developed mainly in the public schools, in contrast to the medical emphasis that has been given to speech correction in Europe. In the 1930 White House Conference Report (91), it was stated that approximately 60,000 speech-defective children were receiving remedial speech instruction in the public schools of this country. Altho it is probable that the number is somewhat larger than that at the present time, the fact still remains that only a small proportion of the total number of school children who need speech correction are receiving it. This is true in spite of the relatively low cost of public-school speech correction.

In the White House Conference Report, cited above, the cost per child per year for speech correction was estimated to be only \$10, as compared with a per child per year cost of \$83 to \$154 for special education for the mentally retarded and \$630 for the blind.

Public-school speech correction is administered both on a statewide and a local district basis. In 1940, Ritzman (94), in a study of state and federal legislation pertaining to speech defectives, found that eight states—California, Kansas, Massachusetts, Minnesota, Missouri, New York, Pennsylvania, and Wisconsin—had enacted legislation bearing in some way upon the matter of public-school speech correction.

All eight states have specific educational requirements for speech correction teachers. Six states require a minimum number of credit hours in speech pathology and allied subjects, ranging from ten credit hours (Pennsylvania) to thirty-six credit hours (New York). Five states require a minimum of credit hours in education which range from four hours (California) to twenty hours (Minnesota). Financial arrangements are made by these states in these ways: (a) Three states contribute a percentage of the cost for each pupil with a speech defect. (b) Three states pay a portion of the salary for each teacher, from \$300 (Pennsylvania) to \$1500 (Minnesota). (c) Massachusetts gives \$200 to each school having a speech correction program.

In the state of Indiana licensing regulations with regard to speech correctionists and hearing conservation specialists have recently been adopted by the state board of education (109). These regulations were formulated by a committee of the Indiana State Speech Correction Association.

### College and University Programs

In the 1943 geographical directory of the American Speech Correction Association (1), ninety-six universities and colleges in thirty states were represented by staff members actively engaged in speech correction. During the past twenty-five years there has been a steady increase in the number of colleges and universities offering work in speech correction, and individual programs have been gradually extended. The general subject of public-school, college, community, and hospital speech clinics has been presented in an article by Stinchfield-Hawk (102).

### Materials Dealing with Methods of Speech Correction

A considerable number of speech correction textbooks, workbooks, and manuals have been published in this country. A recent general textbook is that of Berry and Eisenson (13). Backus (5) has recently published a textbook in speech correction and speech improvement for the general classroom teacher.

Recent books dealing with particular aspects of the field were those on voice training by Anderson (4) and Van Dusen (113), a book by Hahn (42) on stuttering in which brief summaries of the theories and corrective methods of twenty-five American and European authorities were pre-

sented, a practical book on stuttering for the layman by Heltman (46), and two volumes by Fairbanks (34, 35) on voice and articulation defects. A notable book published in 1941 by Carlson (27) deals with various aspects of cerebral palsy.

A recent workbook by Bryngelson, Chapman, and Hansen (19) is designed for use in speech correction classes for children who stutter. A set of materials by Bryngelson and Glaspey (20) includes an articulation test, drill cards and games, and a manual of instructions for the correction of articulatory defects in school children. A new book by Bunger (21) on the Jena method of speech reading (lip reading) contains lesson plans and technics of practical value not only in the teaching of lip reading to the hard of hearing, but also in speech correction for children with normal hearing. A recent book by Huber and Kopp (50) deals with problems of speech correction in the medical clinic.

Pamphlets of practical value have been published recently by Backus (6) on cleft palate, Phelps and Turner (87) on cerebral palsy, Johnson (62) on stuttering, and Fossum (37) on various aspects of speech correction. Fossum's pamphlets are unique in being addressed to the classroom teacher rather than the remedial speech teacher.

The *Journal of Speech Disorders*, published by the American Speech Correction Association since 1936, is the chief journal in this field. Recent issues have contained articles of particular interest to the practical speech correction teacher by Ammons and Johnson (3), Backus and Dunn (7), Carhart (24), Froeschels (38), Gardner (39), Henrikson (47), Henry (48), McKibben (76), Montague (81), Newhart (83), and Schuell (98).

The *Quarterly Journal of Speech and Speech Monographs*, published by the National Association of Teachers of Speech, are also notable sources of material in this field. In the February 1944 *Quarterly Journal of Speech* an article by Will (115) presents in considerable detail the procedures used in treating a thirteen-year-old stuttering boy. The May 1943 issue of the *Nervous Child* (108) was devoted entirely to articles on stuttering.

Speech problems in relation to the war have been dealt with in articles by Carhart (23, 25), Johnson (61), Knower (70), and Mallory (77). Since the issue of June 1943, the *Journal of Speech Disorders* has carried a section entitled "War Notes" prepared by Koepp-Baker (72), defense coordinator of the American Speech Correction Association. A "Selected Bibliography from Current Books and Periodicals on Speech Disorders in Time of War" was published in June 1943 by Hawk and others (44). The Rehabilitation Committee of the American Speech Correction Association is preparing a manual for speech rehabilitation workers in war and postwar programs.

### Research Trends

In an article dealing with recent developments in speech pathology, Strother (104) noted major research trends, and called attention to increasing investigation of speech disorders associated with such organic

conditions as cleft palate, cerebral palsy, paralyses, and injuries to the nervous system. Strother (103) presented a comprehensive bibliography on laryngeal paralyses in the 1942 and 1943 volumes of the *Journal of Speech Disorders*. Generally increasing research activity in the field has been indicated during the past few years by Knower's (69) annual summaries of graduate thesis research in speech.

In three areas particularly there is to be noted markedly increased investigation—(a) speech and language development, (b) the interrelation of the speech and hearing functions, and (c) language behavior, both in its normal and disordered forms.

Irwin and his students (53-57) have in the past three years or so collected more data on the speech of infancy and the first two years of life than had previously been accumulated during the approximately ninety years since the first report on infant speech sounds was published by Lobisch in 1851. Irwin and Chen (55) have summarized all the available data on speech sound elements during the first year of life, giving a month-by-month account of speech development, and evaluating the investigative procedures that have been and can be used in attacking this problem.

Speech development in preschool children—age two to six years for the most part—has been investigated in considerable detail, so far as fluency is concerned, by Branscom (15), Davis (31), Hughes (51), and Tupper (110). As an integral part of this series of studies, Johnson (59) has carried out an investigation of the onset of stuttering in which basic differences between incipient and chronic stuttering were indicated.

The relation between hearing deficiency and defective speech has been systematically discussed from a research point of view by Carhart (24), and a relevant bibliography has been presented by Carhart and Peterson (26). The specific problem of high frequency deafness (hearing loss for high-pitch tones) in relation to the perception of so-called high frequency sounds has been recently investigated by Plummer (89). The ability to hear the differences among speech sounds and the relation of this ability to correctness in the production of speech sounds have been studied elaborately by Hall (43), who concluded that deficiencies in hearing acuity and in the ability to discriminate between speech sounds by ear do not provide a significant explanation for functional articulatory defects. Templin (107) has recently developed a relatively short test of speech sound discrimination, the reliability of which appears to be quite satisfactory. Templin found that the position in the word or syllable in which a sound occurs affects the ease with which it can be discriminated from other sounds. The general character of the relationship between hearing loss and defective speech has been most recently investigated by Sullivan (106), who reported no important differences in hearing acuity between children with functional articulatory defects and the general population of the Minneapolis schools. The relationship of hearing deficiency to speech comprehension, particularly in relation to lip reading and the use of hearing

aids, has been dealt with recently by Mason (79) and Senturia, Silverman, and Harrison (99).

The field of speech pathology has been somewhat extended in the past few years by research on language behavior in which new procedures, quantitative measures, and basic approaches to the study of language behavior have been employed. Goldstein and Scheerer's (41) analyses of schizophrenic language are of interest to the speech pathologist. The theoretical formulations of Korzybski (73) and his students (67) have been of fundamental importance. Sanford (96) has published a comprehensive review of studies dealing with the relationship between speech and personality, and he has also reported the application of a great number of language measures to two sets of autobiographical documents (97). Balken and Masserman (8) have used an adjective-verb ratio in analyzing the language of psychiatric patients. Fairbanks (36) and Mann (78) have employed several measures, especially the type-token ratio (ratio of different words to total words in a language sample), in comparing written and spoken language of university freshmen with that of patients suffering from schizophrenia. Chotlos (28), utilizing data obtained in the Iowa remedial education survey (60), carried thru a relatively elaborate analysis, centered around the basic notion of the type-token ratio, of the written language samples of 108 Iowa school children. In an article introducing the Fairbanks, Mann, and Chotlos studies, Johnson (63) described the measures used by these three investigators and discussed various other quantitative approaches to the study of language behavior. A recent article by Glauber (40) illustrated by means of case records a number of characteristics of the speech of psychoneurotic patients, considered from an essentially psychoanalytic point of view.

In addition to the augmented research activity in these three areas, there has been an increasing amount of investigation with regard to the other aspects of speech pathology. In recent years there have been many studies of stuttering, among which are to be mentioned those of Barber (10, 11), Brown (16), Bryngelson (18), Curtis (30), Douglass (32), Johnson and King (65), Karlin and Sobel (66), Knott and Tjossem (68), Lindsley (75), Rheinberger, Karlin, and Berman (92), Ritzman (94), Strother and Kriegman (105), and Tuthill (111, 112). A series of studies, eighteen to date, have been reported by Johnson and his students (64) under the general heading of "Studies in the Psychology of Stuttering." It is to be said that, in general, research on stuttering is showing a trend away from the earlier emphasis on a search for constitutional or physiological factors—a search that has not been particularly fruitful—toward an increasing emphasis on investigation of the psychological and semantic, or evaluational, aspects of this particular disorder.

With regard to disorders of voice and articulation, a considerable amount of new data has been reported by Fairbanks (33) and by his students, especially Curry (29), Pronovost (90), and Snidecor (100). An investigation of structural deficiencies and anomalies associated with cleft palate

has been made by Brown and Oliver (17). A study of misarticulations made by cases with cerebral palsy has been reported by Heltman and Peacher (45). The most recent comprehensive work on aphasia remains that of Weisenburg and McBride (114), altho the later publications of Nielson (85) and Yacorzyński (116) are to be noted.

The section on "Abstracts of Current Articles," edited by Huber (49), in each issue of the *Journal of Speech Disorders* provides a fairly comprehensive coverage of the research articles in this field that are not published in the *Journal of Speech Disorders*.

## II. The Auditorily Handicapped

### A. Educational Provisions for the Deaf

Fusfeld's 1943 summary (25) of information about schools for the deaf showed that sixty-five public residential schools had 18,574 pupils; 127 public day schools had 4502; and twenty denominational and private schools had 947. McIntire (53) reported that twenty residential schools showed an increase and forty-one a loss in enrolment, the total losses exceeding increases by 1964. The average loss was 7 percent compared to a gain of 13 percent in the public day schools.

The Committee on Hard of Hearing Children of the American Society for the Hard of Hearing reported that over two hundred cities give lip reading to over 20,000 pupils (29). The Department of Lip Reading of the National Education Association (57) reported from a questionnaire survey that the percentage of enrolment in lip reading classes in separate cities was an average of 1.7 percent with a median of 1 percent. Gardner (30), in thirty Oregon counties, found an average of .7 percent of pupils having twenty-five decibel loss (pure tone test) in the better ear with a range of from .002 to .01. The New York City Board of Education investigation (61) concluded that over 10,000 or 1.3 percent of elementary and secondary pupils had over twenty decibel loss in the better ear. On the basis of 1 percent, over 350,000 children in the United States need lip reading instruction.

Whildin (93) summarized gains in education of the deaf since the National Research Council made certain recommendations in 1929. Teachers are now certified and there are accredited teacher-training centers. Gains have been made in surveys, researches on inherited deafness, on methods of developing speech, and prevention of deafness. Innovations of group hearing aids, nursery schools, and vocational guidance were noted.

### Preschool Training

The Association committee report of the American Association to Promote the Teaching of Speech to the Deaf (5) stated that speech and speech reading habits are best established before the age of six years. The aim of the nursery school is to establish desirable habits when the mind is most alert, pliable, and impressionable. The habit of watching the lips can be

taught as early as 2.5 years to the extent that speech conveys meaning. Poore (71) set the goal of bridging the gap for the deaf child as in nursery schools for hearing children. Her plan calls for visiting teachers, cooperation with day-nurseries of hearing children, and establishment of nursery departments in residential schools. Lane (48) described the results of a ten-year nursery school. Such training reduced the gap between mental ability and educational achievement, solved behavior problems, and facilitated an earlier acquisition of speech. Parents of deaf children receive instructions at nursery schools, as reported by Tracy (84).

### Auricular Training Programs

The 1943 tabular statement on information about schools for the deaf (25) indicated that 12 percent of pupils in the residential school and 20 percent in the day schools are taught chiefly or wholly by hearing.

Johnson (44) surveyed and assayed acoustic training programs in forty-six residential schools. There were 241 group hearing aids; the schools owned 150 individual hearing aids and children owned 150 individual aids. A total of 41 percent of the pupils used group hearing aids at least part time; 26 percent of the enrolment used them 100 percent of the time; and 37 percent used the group aids more than 50 percent of their academic time. Johnson reported that 45 percent of the acoustic pupils either could, or could be expected to, hear language without the aid of lip reading. The Florida School for the Deaf (23), using five group aids, reported that the training preserved naturalness of voice of the hard of hearing and developed more natural speech among those with very poor hearing. Oakland's new acoustically treated wing produces 30 percent better intelligibility of speech scores than was obtained in the old building. Greater educational achievement is noted and more hard of hearing are returning to regular classes (18). Elliott's questionnaire (20) produced statements that acoustic training enabled pupils to correct their own errors in speech and helped them to adjust better to life. The Association committee report on "Use of Hearing" (7) emphasized the maximum use of residual hearing of each child and recommended that conditions should parallel as closely as possible the speech and language development of those with normal hearing.

Analysis by a group of etiologists (42) of speech characteristics of 366 children revealed that those receiving auricular training had superior speech to the others in all degrees of auditory acuity. Heider (35) studied the effect of acoustic training at Mt. Airy School and considered this training to be one of the best ways to improve lip reading. Kerridge (47) reported progress of pupils according to various degrees of hearing loss. Hudgins and Numbers (41) advised that hard of hearing children be taught with visual and auditory methods combined. Presto (72) reported training a sixteen-year-old girl who showed no appreciable hearing. With a hearing aid he established a natural voice and obtained rhythm and color in her speech. Nelson (58) offered sixteen essential points for a practical

program for training residual hearing. Hester (38) discouraged use of hearing aids on the deaf with no more than 30 or 35 percent residual hearing. The South Carolina School for the deaf (78) reported a hearing aid program for 45 percent of its enrolment. Myklebust (56) reported use of individual hearing aids on twelve pupils of different ages and with losses from 30 to 87.8 percent. Monthly speech and achievement tests revealed improvement in speech and speech-sound discrimination, the younger age-levels showing the best progress. Johnson (44) gave plans for habituating pupils to hearing aids in order to insure their continued use after leaving school.

### Lip Reading Training

The Association committee report on speech reading in schools for the deaf (5) listed eighteen causes of poor speech reading instruction. They recommended better-trained teachers, use of materials in daily life situations, adequate equipment, small graded classes, and cooperation of entire staff. A new text (3) was published by the American Society for the Hard of Hearing. The practice material was selected for visibility from 50,000 sentences furnished by New York City children. Mason (51) improved her moving picture test for measuring visual-speech comprehension. Heider (35) found a high correlation between residual hearing and lip reading ability, but remarked that some other factor than language organization is important in lip reading. Albright (1) reported that in a controlled test, simultaneous use of eye and ear was best; the use of the eye alone was second; and the ear alone was third in perceiving spelling words. Howes (39) urged for early use in lip reading training a basic vocabulary of 220 words. Russell (74) demonstrated a program for teaching lip reading to preschool children in the home. Bodycomb (12) surveyed ability of graduates of a deaf school to use lip reading. Of 258 replies, 232 reported that lip reading helped them in their occupations.

### Survey of Conditions in Public Day Schools

Facilities for the hard of hearing and the deaf in New York State were compiled by a temporary state commission (62). The Library of Congress published a digest of laws affecting the hard of hearing and the deaf (85). Thirty-three states have some provision for detecting deafness in children but only twenty-three have mandatory laws. Eighteen states provide compulsory education of the hearing-handicapped, other than in the schools for the deaf. Indiana and Washington enacted legislation in 1941 requiring annual hearing tests of all school children. Pennsylvania's testing program is facilitated by a state supervisor, and by direction of supervisors of special education established in every county. Consultants in hearing have been employed in three state departments of health—Oregon, Michigan, and California. Oregon and Washington have appointed assistant superintendents of education of physically handicapped children, and California has added a consultant in the state department of education.

Gardner (28, 30) reported 4.4 percent of 66,060 Oregon children deficient on the basis of two group tests and one pure tone test. He noted that 1 percent of Oregon, Indiana, and Iowa children have one ear with a severe defect of hearing. Bjorlee (8) reported 10.3 percent of 36,932 pupils in Maryland were deficient, but only 2.3 percent had fifteen decibel or more loss on the group audiometer. Padou (65) reported 2.07 percent deficient on two phonograph and one pure tone test. Only 428 out of 761 (1.4 percent) obtained lip reading because of personnel shortage. The Wallins (89) reported 5 percent of 24,932 Wilmington, Delaware, children deficient on group tests and only .7 percent were recommended for lip reading. Gardner (30, 31), Miller (54), Newhart (60), and Swartwood (80) criticized past programs and presented steps necessary for adequate medical-educational adjustment of hard of hearing children. Gardner (29) wrote on the history and present status of the education of the hard of hearing.

### Research on Hearing Tests

Black (10) tested seventy-seven children four to eight years old and found no appreciable differences in the medians of the different year groups. Westlake (91) tested 875 children four to eight years old, seventy-five being younger than four. The audiograms showed no significant differences between young children and adults. Repeated audiometer tests on young children showed considerable reliability. Macfarlan (50) suggested technics to obtain responses of young children to sounds. Gardner (31) described methods of testing kindergarten and first-grade pupils, singly and in groups, with the phonograph audiometer. Westlake (92) observed that testers who watched the intensity dial on pure tone and audiometers obtained a threshold nearer zero than testers who looked away. Gaines (27) reported that most children with cleft palate have hearing defects. Peterson (66) reported that persons prefer one ear to another in listening to a localized sound. Currier (16) proved that noise levels in offices of otolaryngologists lowered the threshold twenty to twenty-five decibels. He cited these results as proof of need for sound-treated rooms for testing hearing in offices and schools.

### Studies of Teaching Procedures

Farquhar and Gough (22) used the ophthalmograph with controlled groups to determine its value in improving reading of the deaf. Altho it has some disadvantages, the instrument can be used to make substantial gains in reading. Brill (13) proved the importance of standardizing reading tests on deaf pupils. He found that the visual language tests have high predictability with regard to the ability to learn language for pupils between seven and eleven years of age. O'Connor (63) outlined eight stages of educational differentials of the acoustically handicapped and emphasized the individual needs of each group. Voelker (88) arranged a recording strip chart, amplifier, and microphone to assist in teaching natural speech to the deaf. New (59) presented colors with specific sounds

to establish concrete associations. Shaffer (76) combined the Jena method of lip reading with the Smith system of speech development to integrate teaching speech and lip reading. Purdy (73) demonstrated the value of films as visual aids in teaching, if accompanied by adequate preparation. The U. S. Office of Education listed visual aids for instructional use in a revised pamphlet (87).

### Teaching of Speech

Kelley and Guilmartin (45) constructed a speech test for deaf children which furnishes an individual diagnostic profile of speech, and indicates defective elements and amount of improvement. Hudgins (40) tested speech by preparing for each pupil sets of ten unrelated sentences on cards to be used annually. Auditors were not pupils' teachers, but were familiar with speech of the deaf. Coefficients of correlation ran .83 to .86 in successive years. The Association's committee report on speech (6) deplored the self-deception of teachers in measuring success of their efforts. The committee recalled that teachers in one school reported a speech intelligibility of 98.2 percent which is probably not obtainable in a group of normal-hearing pupils. Objective tests in two schools of two hundred pupils showed that 25 percent had scores above 50 percent intelligibility and only two pupils had scores above 75 percent. The committee recommended a well-integrated, supervised speech program; better training of teachers; acceptance of methods based on modern physiological phonetics; and use of speech in all speaking situations. Silverman (77) outlined the program of teaching speech at Central Institute for the Deaf, holding as a goal "intelligibility of speech to all who comprise the social milieu of the child."

### Speech and Hearing

Plummer (70) found no appreciable influence of high frequency losses upon ability to discriminate between sounds whose acoustic characteristics are located in the same high frequencies. Goodfellow (32) found no correlation between hearing loss and Northwestern Speech Perception test. Kerridge (47) analyzed extensively the hearing speech of deaf children. Irwin and Chen (43) reported on the speech sound elements during the first year of life. Froeschels (24) presented the use of primitive chewing pattern as a therapeutic technic in teaching and correcting speech. Bell Telephone Laboratories were reported (79) to have photographed the vocal chords at 4000 frames a second, revealing movements at different pitches and intensities.

### Hearing Aids

Timberlake, after observing group hearing aids (81), insisted that persons with conversational loss can be fitted adequately; any person with losses up to sixty decibels can get adequate hearing; others can obtain some help for essential purposes of life. Watson (90) offered standards for

hearing aids regarding amplification, distortion, fidelity, instrument noise, and stability operation. Kerridge (46) outlined the administration of a pioneering hearing aid clinic. Timberlake (82) listed sixteen hearing aid clinics in twelve states conducted by hospitals, universities, and societies for the hard of hearing.

### Vocational Guidance, Training, and Placement

In his survey of 133 day schools for the deaf, Fusfeld (26) found eighty-one or three-fifths do not teach trades, either because pupils are too young or facilities are not available. Bunger (14) advocated hearing tests be given to all college students and remedial and vocational guidance programs be instituted to forestall economic and social readjustments. Bjorlee's survey in Maryland (9) showed that the deaf were employed in practically every vocation in industry, yet the state school trained only in four major vocations. Schowe's analysis (75) of wartime opportunities for the deaf indicated that interests and aptitudes of the deaf are so varied that it may be simpler to give basic training rather than training in particular trades. Groht (33) maintained that better adjustment to industry could be reached by developing spontaneous and everyday language in deaf pupils. On the other hand, at the Los Angeles employment services it is considered that providing a job is not full rehabilitation. Rather, the employed must adjust to society and schools must assist in this adjustment (21). According to Montague (55), industrial analyses show less liability to injury among the physically handicapped. U. S. Office of Education (86) published a manual of rehabilitation of the deaf and hard of hearing. Bluett (11) prepared a compendium of advice and information for the adult hard of hearing.

### Needed Research

Numerous studies made in the earlier period of measuring hearing need reinvestigation. Criteria of acoustic impairment of compared cases included many normally hearing who obviously affected the factors under exploration. The deaf child who deviates from his own group needs special study in order that it might be determined how and to what extent he can be taught. More study should be given to the question: Should deaf schools be maintained for the profoundly deaf? Psychological and psychiatric research on social deviations and "mental quirks" should be initiated. To what extent are teachers and teaching methods responsible for the problem-deaf? The introspection technics might reveal mental processes of learning, language, and speech development. What information can pediatricians and other specialists give about deaf children that might reveal important facts concerned with development of the whole child? Why do people with the same type of hearing loss hear with varying differences? Controlled achievement studies should be made on young pupils who use individual hearing aids, with and without the additional training in speech, language, and kindred subjects.

**B. Psychological Studies Related to the Education  
of the Deaf and Hard of Hearing**

Pintner and others (69) urged employment of school psychologists and counselors in schools for the deaf. O'Connor and Simon (64) praised the recent collaboration with psychologists and educators whose working tools are opening up a wealth of material in the field of the deaf. New textbooks in education of the handicapped summarized the psychological studies of the deaf and hard of hearing (34, 69).

That the teachers consider many deaf pupils to be problems was shown by O'Connor's survey (64), wherein teachers reported that 50 percent of the deaf pupils gave evidences of maladjustment. However, only forty-nine pupils, the most frequently referred, were compared with the school population. Within the problem group, the congenitally deaf have thirteen points and the adventitious deaf have eleven points lower IQ than the school population. The problem group suffered deafness a year later (median) than the school population. The median hearing loss of both groups was ninety-one decibels. More deaf relatives were among the problem group, and for them there were also more problems concerning the home. Burchard and Myklebust (15) compared the personality and social maturity of congenital and adventitiously deaf. Both groups showed inferior adjustment compared to the hearing groups. Males showed inferior adjustment to females. Since length of residence was found not to influence behavior, and yet deaf children were twenty points inferior in social competence, schools for the deaf were justly criticized for neglecting social training. Pintner (68) studied the personality problems of 1200 normal and a like number of hard of hearing pupils in New York City. He found no significant differences in traits such as ascendancy-submission and introversion-extroversion, but found less emotional stability among those having greater than thirty decibels loss in hearing. In summing up studies on personality differences, Pintner and his associates (69) stated that deafness itself does not cause types of personality. The deaf belong to all types. However, their adaptation necessarily is different from that required by the hearing. As to the hard of hearing, the problems are the same as those of other persons, but a hearing defect may be the center of focus of the personal problems.

**Learning Ability**

Lane and Schneider (49) administered a battery of seven well-known performance tests to school-age deaf children. They obtained average IQ's of approximately 104 for both hearing and deaf children, and insisted that the deaf child will be found to be normal if directions and responses of the test involve no language. Pintner (69) determined the approximate intelligence by different scales from averages of different studies: performance, 91; nonlanguage group, 85; Goodenough test, 88; and estimated that the average IQ of the deaf does not quite reach ninety. Burchard and Myklebust (15) compared the congenital and adventitious

deaf with respect to intelligence. There was no significant difference, but the deaf boys stood slightly higher than the deaf girls. There was no significant effect of length of residence.

Few studies in special abilities were made in the last three or four years. The McAdory Art test was administered by Pintner (67) to 333 deaf boys and 384 deaf girls. Deaf boys were about equal to hearing boys in artistic appreciation. Deaf girls were definitely below the norms for hearing girls. Deaf boys and girls were about equal. Cutler (17) prepared a summary of reports and psychological experiments with the deaf for the years, 1932-1938. Elliott (19) tabulated reports of eighty-two studies on the deaf during the last thirty years in which standardized tests were employed.

### Language Development

Heider and Heider (37) analyzed the forms of communication of deaf and hearing children. The deaf conversed and explained largely by gesture, pantomime, pointing, and head gestures. The investigators concluded that adjustment problems of the deaf child begin long before he enters school. He meets more frustrations and less understanding of his ideas; his play is less rich; his relations with others are less simple; and he is handicapped in social and intellectual development. Mason (52) described a speechless child of six years who had been kept in a dark room by deaf parents. In eighteen months of training, the child acquired 1500 words in vocabulary and changed from an apparent feeble-minded to a normal intelligent child.

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## CHAPTER VII

### The Negroes

AMBROSE CALIVER

THE REVIEW of the literature on Negroes which appeared in the June 1941 issue of the REVIEW referred particularly to material published during the five preceding years. This report, in the main, deals with materials published during the past three years, is highly selective, and refers almost wholly to printed materials that are fairly accessible.

#### Social and Economic Conditions Relating to Education

In pointing out the necessity of studying Negro education in its social and economic setting, Brown (8) presented a discussion of many of the social and economic factors involved as a background for understanding educational problems of Negroes; threw light on their educational needs; and suggested ways in which each college can develop its own objectives. By way of broadening this concept, Locke (29), in presenting a study to coordinate the specialized and authoritative literature of the various social science disciplines, reported that civilization, to be properly understood, should be studied in the setting of world culture. Richards (41) showed how migration contributes to the social education of Negroes, while Bond (6), in pointing out the effects of general cultural forces, said that Negro children live permanently not in two "worlds" (as do immigrant children) but in several different "worlds," the implications of which are just beginning to be sensed. An example of this was given in Brunner's (10) conclusions following an experiment in community organization and adult education in South Carolina, namely, that, when faced with the question of improving conditions among Negroes, a member of the majority group is forced by the usage of society to think first of what will be the reaction of his group to any act on his part in behalf of the minority group. Likewise, a member of the minority group will think first of what will be the reaction, not of his own group, but of the majority group, to any effort on his part for the improvement of his own group. The needs and welfare of the minority group thus become subordinate to the thinking of the majority group. However, Powdermaker (36) reported that the Negro is gradually beginning to attain his goals (which are becoming increasingly the same as those of white persons) thru competition and aggressive struggle so characteristic of our American culture, rather than thru meekness and subservience. In spite of the responsibility of education in changing behavior patterns and social status, Clark (14) concluded that the most effective leadership in improving the present status of the American Negro, rather than coming from our colleges, has come either from the ranks of labor or from the church. Alexander (2) reported that, while the Negro recognizes his cultural

shortages, "he has hope, works steadily to improve his conditions, and is making appreciable gains."

### General Educational Status

Blose and Caliver (5) reported that considerable progress has been made in the education of Negroes during the decade from 1930 to 1940. They pointed out that in some areas of educational service the rate of progress has been great, while in other areas, even tho the absolute progress may be great, much remains to be done for the progress in relation to the standard of the nation or of the region in which segregated schools for Negroes are maintained before equality is achieved. They found percentage increases during the decade in designated items to be as follows: average daily attendance, 18.7; total number of days attended, 40.2; average number of days attended by each pupil, 29.9; average length of school term, 18.2; enrolment in high-school grades, 126; enrolment in publicly supported colleges, 341.8; and receipts of public colleges from public sources, 21. The Southern States Work-Conference (46) reported that the regularity of school attendance of Negro children compares favorably with that of white children—in spite of more limited transportation, poorer health conditions, and less adequate facilities, but that the problem of grade distribution is still a major one.

Blauch and Jenkins (4) compared twenty-five selected colleges for Negroes with the institutional pattern developed by the North Central Association of Colleges and Secondary Schools. They found that in terms of the measures used, colleges for Negroes, in general, are below par in practically every significant area of educational service. In spite of the lack of equality of educational opportunity, they found that certain institutions for Negroes rank among the best of the country.

### Teachers

Considerable data were presented by the Southern States Work-Conference (46) on teachers, which reported that Negro teachers' salaries have increased materially in a majority of states. However, the ratio between white and Negro teachers' salaries has not changed appreciably, the average salary of Negro teachers being between 50 and 60 percent of the average salary of white teachers. An attack on the problem is being vigorously pushed thru court action by Negro teachers organizations, and Ransom (37) reported in 1942 that enormous gains had been made in the southern states in the fight for equalization of salaries for Negro teachers. Ransom (38, 39, 40) also reported on litigation concerning Negro teachers' salaries and discussed the defeat of Senate Bill 637.

The training of Negro teachers in the South, while still not as high as that of white teachers in that region, has improved greatly during recent years; and the Southern States Work-Conference (46) reported that it seems reasonable to assume that within a relatively short time in most areas their training will compare favorably with that of white teachers.

In 1941, 48 percent of the Negro teachers in fourteen southern states had more than two years of college training. Jenkins (24) reported that a majority of Negro college students are preparing to enter the teaching profession, not permanently however, but as a "steppingstone" occupation.

### Mental Aptitude and Achievement

In discussing the relation of results of intelligence tests to social background, Canady (12) pointed out the difficulty of equating Negroes and white persons by reference to similarity of environment, and concluded that Negro-white differences in intelligence test scores cannot be changed except thru a radical change in social and economic conditions of Negroes. Jenkins (24) reported that entering Negro freshmen and end-of-year seniors attain low ranks on standardized achievement tests, and Davis (19) showed that many Negro high-school graduates with high scholastic aptitude do not continue their education. Jenkins (24) further found that the entering freshmen and end-of-year seniors also perform thruout the range of the tests administered and that there is an appreciable overlapping of scores of freshmen and seniors on the tests administered to both groups.

Alexander (2) reported that there is no conclusive evidence to show that the Negro is less educable and improvable than any other racial group. In discussing the achievements of Negroes and their contributions to the national culture, Embree (21) presented a few biographical sketches of Negroes in different fields of activity, and then expressed the hope that "As the odds against him grow less, and as equality approaches in America in everyday life, the Negro will not succumb to the standardizing influences of industrialism and middle class conventions."

### Curriculum and Instruction

The Southern States Work-Conference (47), in discussing the rapid changes in society and how the very fabric of the economic system has changed within recent years, particularly as it affects Negroes, reported that in the average school these problems have received entirely too little attention; that most secondary schools have been dominated by the college preparatory concept; and that there is need for a greatly enriched curriculum for both elementary and high-school pupils, with much less emphasis on college entrance requirements. The last is also the conclusion of Jackson (23), Snitow (45), and White (50).

There is also need for improvement of the Negro college curriculums according to Branson (7) and Jenkins (24), who studied the Negro college curriculums from the viewpoint of availability of fields of specialization in both undergraduate and graduate offerings.

Improvement of instruction in reading is one of the great needs, according to Davenport (18), who found that the reading levels of the entering Negro students were far below those expected for persons attempting to do college work. Lee (28) said that circumstances militate against the southern Negro rural-school teacher acquiring high reading ability, unless special

means are devised. He reported on the results of a reading clinic for Negro teachers in Georgia, where there was an average improvement of more than three grades in the rate of reading and comprehension as measured by standardized tests.

### **Occupational Situation and Vocational Education and Guidance**

The National Urban League (35) reported that during 1943 the movement of Negro workers into war production industries thruout the nation continued with accelerated speed, both as to numbers and in the type of work for which they were employed. More than two-thirds of the plants surveyed reported that they were satisfied with the work of Negroes; one-sixth reported their work to be fairly satisfactory; and only nine reported that their work was not as good as that of white workers. Two hundred and fifty-three of the 300 industries studied reported that "on the basis of current experience with Negroes, they would continue to employ them after the war."

In a study of employment problems of Negroes, the Bureau of Employment Security (49) of the War Manpower Commission concluded that "adequate treatment of the placement problems of Negro work-applicants demands an intelligent understanding of the difficulty which faces the Negro in his efforts toward satisfactory adjustments to employment." In considering some of these difficulties Embree (21) pointed out that the opposition on the part of white persons is not to working with Negroes. The opposition has been to breaking down the caste system by employing Negroes in the same jobs, at the same pay, and with the same union status.

The Southern States Work-Conference (46) reported the urgent need of more adequate vocational schools or departments for Negroes in many areas, and said the states should carefully examine and revise their plans for distributing vocational funds and for administering programs of vocational training so as to assure equitable distribution of the state and federal funds.

### **Adult Education**

As an indication of the need for adult education among Negroes, Johnson (1) called attention to the high rate of rejection of Negro draftees for educational deficiencies. The U. S. Census (48) reported that in 1940 the median number of school years completed by Negroes twenty-five years old and over was only 5.7. Atkins (3), in reporting a study of adult education in Negro colleges, focused attention on some problems of the adult Negro population that Negro colleges should attack, discussed the present status of adult education in Negro colleges, and indicated some important improvements and expansions needed.

### **Health and Health Education**

Embree (21) found that the death rates among Negroes, while on the decline, are still high, varying from three to six times that for white persons

for certain diseases. The life expectancy is fifty-three years, or twelve years less than that for white persons, and daily sickness is 43 percent greater in certain communities among Negroes than among white persons. Embree concluded that these great discrepancies between white persons and Negroes are caused chiefly by living conditions and lack of medical service, rather than by biological inheritance. Johnson (1) concluded that these high rates are in turn a reflection of the social disadvantages suffered by Negroes. In addition to the generally acknowledged inadequate health education and service in public elementary and secondary schools, Cornely and Rogers (15) found serious deficiencies in the provisions and practices for safety and health education in colleges for Negroes, which they concluded are due to (a) lack of interest on the part of administrators, (b) lack of budgetary allowances, (c) lack of trained personnel, and (d) lack of effective organization.

### Intercultural Education and Race Relations

The Southern States Work-Conference (46) reported that better education and understanding have, in general, tended to promote better race relations throughout the South. The Department of Supervisors and Directors of Instruction of the NEA (34) presented descriptions of work done in intercultural education throughout the country. Carpenter (13) reported that history textbook accounts of Negroes have not kept pace with developments in the field of history and history teaching. Wright (51) found that public-school teachers (in New Jersey) did much in the way of training white children in their classes to assume a fair-minded attitude toward their colored neighbors.

Herskovits (22) reported that a study of the Negro's past is important in developing better race relations, because such study shapes attitudes toward Negroes on the part of white persons and attitudes of Negroes toward themselves. In this connection, Daniel (16), in his study of the reading interests and needs of Negro college freshmen, found that they prefer above all to read books relating to the Negro. Rollins (43) presented underlying principles which should guide a teacher in choosing books about Negroes for young people, and gave a list of available books which depict Negro life honestly and accurately.

Morgan (32) discussed the origin, research, and program involved in the integration of the study of Negroes into the curriculums of the Chicago schools. A brief description is given of the units of study prepared for Grades I to VIII. The Bureau for Intercultural Education (44) presented the first in a series of manuals designed for the purpose of improving race and culture group relations.

Johnson (26) discussed the theory and practice of segregation in light of democratic principles. He concluded that the policy of segregation and the permanence of the pattern differ for groups regarded as assimilable and unassimilable. Marcson (30), after discussing the various types of segregated schools, both voluntary and involuntary, concluded that "in

numerous ways these schools tend to preserve traits not always in harmony with the American culture pattern. . . . The social orientation of the child within a segregated system of education tends toward the perpetuation of ethnic and class differences." Myrdal (33) concluded that while Negroes are a minority, and they are poor and suppressed, they have the advantage that they can fight wholeheartedly. The whites are split in their personality. Their better selves are with the insurgents.

### Equality of Educational Opportunity

The Southern States Work-Conference (46) set forth a basic philosophy when it stated that a permanent social, economic, and political advance is definitely dependent upon an educated citizenship. On the basis of a study of 966 counties in the South, Brown (8) found that there are wide variations in the educational provisions made in different states for both the white and Negro population, that within any state there are striking inequalities among the various counties, and that the agricultural pattern rather than the high proportion of Negroes is the major factor in the present (unequal) situation.

In considering the problems relating to salary inequalities the Southern States Work-Conference (46) found that these inequalities arise from the fact that a number of states have distributed funds without establishing adequate safeguards to insure their proper use; and concluded that if funds which should be available for salaries of Negro teachers are not directed to other purposes the situation will be greatly improved. In particular, this Conference reported that the problem of transportation for Negro children has hardly been touched in many areas; that on the minimum basis of the average amount invested in buildings per white pupil, the amount required for additional buildings for Negroes is estimated to be approximately \$276,000,000. If Negro teachers in eleven southern states were to be paid the same salaries as white teachers with the same amount of training (and without regard to teaching load), it would require an additional annual expenditure of approximately \$25,000,000. This Conference concluded, therefore, that the southern states cannot possibly adequately finance their schools, either for white persons or Negroes, unless federal funds are made available.

That the question of equality of educational opportunity is a national question is indicated by Caliver's (11) summary report of the findings of the National Survey of the Higher Education of Negroes. It points out the interrelationship between education and other social and economic factors in the life of the community, state, and nation; shows how the mobility of the population ties together the interests of the different regions of the country; and indicates that many more northern Negroes attend Negro colleges in the South than southern Negroes attend mixed colleges in the North.

Daniel and Wright (17), after reporting what public and private educational agencies have done to maintain Negro morale, concluded that

there is still much room for social action and leadership if the United States is to capitalize upon the circumstances which give it the greatest opportunity to proclaim, promote, and practice the principle of equal opportunity for all regardless of race, color, and creed.

### Graduate Study and Research

In summarizing research in colleges and universities bearing on Negroes over a ten-year period (1933-42), Knox (27) found that there had been an encouraging trend. There were 1755 studies on Negroes reported to him during the period. In comparing the first five-year period with the second five-year period of the decade he found the following results, respectively, for given items: (a) percent of institutions replying, 62.3 and 96.8; (b) percent of institutions reporting completion of one or more research studies, 16.2 and 30.4; (c) average number of studies annually reported, 127 and 204; (d) percent of authors of master's theses who were Negroes, 64.4 and 71.0; (e) percent of authors of doctor's dissertations who were Negroes, 43.4 and 42.5; and (f) percent of institutions that are in the South, 37.6 and 53.0. Rochelle (42) reported an obvious awareness in the United States of the aims and values of graduate study and research, especially among Negroes in the southern states where, he believes, the need for this type of training for Negroes is urgent and where the facilities are inadequate. Myrdal (33) found that research in and discussion of the education of Negroes has been prolific, and McWilliams (31) reported that no other problem in the United States has received so much attention as the Negro problem.

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## CHAPTER VIII

### Bilingual Children

L. S. TIREMAN

A SURVEY of the literature (January 1941 to December 1943) dealing with bilingual children seemed to indicate (a) the major interest was related to the problems inherent in teaching the bilingual children rather than to the fundamental psychological aspects of bilingualism; and (b) that there was a growing interest in the teaching of Spanish in the elementary grades.

#### Psychological and Sociological Aspects of Bilingualism

Smith (21) investigated the effect of bilingual background on college aptitude scores and grade points at the University of Hawaii. Students representing five different lines of racial ancestry were given the Hoffman Bilingual Inventory supplemented with questions relative to the type of language spoken at home. These results, scores on the American Council Psychological Examination, and the grade point ratios formed the data for the study. The correlations between the college aptitude tests and grade point ratios ranged from .31 to .76. "Very low negative correlations were found between the scores on the bilingual inventory and the college aptitude tests for all groups but the Japanese" (21:363). In general, "It would appear that bilingual background affects the college entrance examination scores of students at the University of Hawaii much more than it does their achievement after entrance so far as that is measured by the college grade-point ratio" (21:364).

Marshall and Phillips (10) paired forty college students drawn from all classes who were capable of speaking and understanding another language in addition to English with forty students who possessed facility in English only. Pairing was done on the basis of the American Council Psychological Examination and Shepherd English Text given at entrance to college students. Eleven different languages were represented. The record of all grades was obtained. The means and S.D. for both groups were computed. The mean for the grades of the bilinguals was 1.90, S.D. .707; for monolinguals, 1.93, S.D. .717. The authors point out that pairing on the basis of intelligence and English may have ruled the effect of bilingualism.

#### School Adjustment

Broom (2) studied the reading scores of Anglo-American and Spanish-American pupils in grades low five to high eight. Word meaning deficiencies and inability to organize materials caused more errors in comprehension than all other factors together. "The Anglo-American students have a decided average advantage in reading comprehension over the Spanish American students in the same grade level" (2:590). Broom pointed out

that the difference may be due to "part time instruction in the past, more inexperienced teachers and fewer facilities with which to work in the past, as well as bilingual handicap" (2:591). Steuber (23) attempted to determine what differences in reading existed between English- and Spanish-speaking children in the second grade. The DeVault Primary Reading Test, Form I, was given to 238 English-speaking children and 688 Spanish-speaking children in Grades IIA in the El Paso schools. The median of the English-speaking children was 22.71; S.D., 8.95. For the Spanish-speaking children the median was 20.98; S.D., 8.65. "Since there is a significant difference in the silent reading achievement between the two groups . . . it follows that these two groups cannot be expected subsequently to achieve similarity if the same methods of instruction continue to be used for both groups."

### Physical Achievement

Thompson and Dove (25) used certain physical achievement tests (baseball throw, base running, chinning, sixty yard dash, jump and reach, shot put) to determine differences between Anglo- and Spanish-American boys in junior high school. When equated according to age, health, and weight, the Spanish-American boys were somewhat superior in all events tested and significantly superior in all except the shot put.

### Tests

The Committee on Modern Languages of the American Council on Education has developed a series of "Inter-American" tests in parallel English and Spanish editions, but these tests have not yet been released for general use. Callicutt (4) made an evaluation of certain reading tests in this series, and Rodriguez-Bou (17) has studied the parallelism of some of the vocabulary tests. Both reports indicate a degree of success in reaching the objective of parallelism.

### Sociological Studies

Sanchez (19) made a careful sociological study of Taos County in northern New Mexico. The language factor is appraised as being only one factor in the total situation. Other factors which contribute to the status quo are discussed. This type of study acts as a healthy counteraction to those studies of bilingualism which consider only one phase of the problem.

*Americans All* (14) is a yearbook which is worthy of the attention of students of bilingual groups. It introduces programs carried on by schools to promote national and social undertakings, issues in intercultural education, and technics of cultural building.

### The Curriculum

There has been a tremendous increase in the number of schools which introduce Spanish in elementary grades. There are probably causes for this added emphasis, such as (a) feeling, as suggested above, that such

work will actually improve the teaching of English; and (b) a sincere desire, prompted by world conditions, to improve our international relations, and to improve the social situation. Unfortunately, there has been very little experimentation to indicate whether any of these aims are being achieved.

Brown (3) gave some useful suggestions for teaching Spanish. Garza (5) pointed out that Mexicans belong to the Caucasian race. Hamilton (6) sent a questionnaire to teachers in the field of Spanish in Texas. The returns favored the introduction of spoken Spanish in the third grade. Hughey (7) gave twenty-two practical suggestions for the teacher. Lomax and McCandless (9) gave suggestions for teaching Spanish. This is one of the few reports to cite any data. One third-grade class learned 140 oral Spanish words in eight weeks. Murdock and Wright (13) described classes in the third and fifth grades, which were requested by the parents. These classes meet after school. Oral repetition was the chief aim. This is a useful account for beginning teachers. Netzer (15) described the work of a teacher who has a class of more than eighty beginners who knew little or no English. Very little that is new is included in this article. Rebolledo (16) listed and criticized severely many of the texts which have been prepared for teaching Spanish in the elementary grades. In New Mexico he favored the introduction of Spanish in the fifth grade rather than in the third, as seems customary in Texas. Smith (22) urged strongly that Spanish-speaking children should be separated from the non-Spanish-speaking children. "Rather than serving as a spur to the non-Spanish speaking student, the Mexican pupil tends to accentuate a growing feeling of futility and inferiority. . . . Segregation not on a basis of nationality but upon proof of ability to handle the language is the only answer wherever practicable." Hutton (8), in reporting the work of a social studies course for Spanish-speaking pupils in the Southwest, took that position. She believed that such a separation in the class will save the Mexican children from boredom. Wooten (31) supported the same point of view. "It is hardly fair to start the class as a single unit." She would divide the class. The English students should have a Spanish-speaking vocabulary of three hundred words and a Spanish-reading vocabulary of four hundred words by the end of the first six weeks. The Spanish section should be given work in written Spanish and the correction of errors. "Every third word is English or an English distortion." By the third six-weeks period the two groups can be merged, if the Anglo-American group has been given the proper ground work. Mays (11, 12), Tireman (27), Ward (28), Wedburg (29), Wellborne (30), and Zellars (32) gave suggestions dealing with the practical aspects.

Bain (1) put the question of language teaching very plainly. "The underlying problem is what is best for the child . . . now obviously what is good for a child depends on how well it serves his needs. A child needs language so he can express his thoughts and communicate with others. To get new ideas he classifies his half formed notions through expression." Smith (22) reported some of the peculiarities of English dialect as it was spoken in

Hawaii. These were discovered in the speech of little children two to six years by the means of a word-frequency count. Fifty sentence samples of conversation were recorded while the children were engaged in free play. Lists of these peculiarities were given in the article. This study is especially interesting to students of bilingualism as an example of a well-known technic applied to the study of bilingualism.

### Teaching Welsh

There have in the past few years appeared several inquiries as to the wisdom of the present policy of teaching the Welsh language as it is pursued in Wales. Difficulties among the bilinguals have prompted the governors of the county schools of Caernarvon to suggest (a) an extra year for the primary schools, (b) raising the age for the special placement examinations from eleven to twelve years. Saer (18) reported that the bilingual situation in the Welsh schools is being further complicated by the large number of English children who have moved to rural parts of Wales because of war conditions in England. These children came into schools where the pupils speak both Welsh and English in their daily lives. The Welsh language is used in the beginning grades and in courses in Welsh literature and language in the upper grades. Suggestions were made for grouping, the use of the mother tongue, and phonetics. The article was written for teachers who are interested in teaching modern languages, but it is of some general interest to students of bilingual problems.

### Teaching Indian

An interesting experiment in bilingual education is being conducted by the U. S. Office of Indian Affairs in several American Indian tribes. In some instances the oral tribal language has been reproduced in a phonetic alphabet and school readers printed in this alphabet. In one reader the story is printed in English on one side and in the phonetic alphabet on the opposite page. It is the belief of the Indian Office that these procedures will facilitate learning of English. Since the work is being undertaken on a larger scale than can ordinarily be attempted by an individual research student, it is earnestly hoped that a careful program of evaluation will be undertaken. As far as the reviewer knows there is little scientific evidence to support this experiment.

### Experimental School

Tireman and Watson (26) gave a detailed report of five years experimentation in a school of native Spanish-speaking pupils. An attempt was made to adapt the curriculum to the needs of the children in that particular community. The results showed that the three R's did not suffer and a great deal of additional information was learned about health and conservation. "Reading Comprehension is close to, or above, the normal expectation in the first five grades" (26:110). This seems to support the point of view that native Spanish-speaking children will progress as English-speaking children do if proper methods of instruction are used.

Too frequently students of bilingualism conceive the problem in too narrow terms. In addition to the technical difficulties of language itself, are the basic factors of socio-economic status, health, and psychological implications. While the study reviewed above is suggestive, the period of study was too short to admit much change in these basic factors. Long-term studies are needed.

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## CHAPTER IX

### The Indians

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#### Study of Indian Personality

BEGINNING IN JANUARY 1942, the Office of Indian Affairs in collaboration with the Committee on Human Development of the University of Chicago (Lloyd Warner, Robert Havighurst, and Ralph Tyler) undertook a study of Indian personality development in five selected areas of the Indian Service. The study undertook to investigate and compare the development of personality from birth to adulthood and the relation of the child training pattern to the social structure, especially as regards the organization and functions of authority; and to apply the result of this study to the problem of Indian administration with special emphasis on education.

The field work involved getting the life history and social background data of about 1000 selected children—ages six to eighteen—in eleven communities of the Papago, Hopi, Navaho, United Pueblos, and Pine Ridge Sioux jurisdictions. In each area, two groups were selected—one which thru the years has had continued contact with the white environment and the other which during the same period of time has followed largely the native pattern of life.

Seven psychological tests designed to reveal emotional and intellectual developments have been administered to the entire groups of individuals studied. These tests included (a) moral judgment, (b) emotional response, (c) moral ideology, (d) free drawing, (e) Rorschach, (f) thematic apperception, and (g) Arthur performance. The results of these tests have been scored by specialists. Complete medical examinations were given to all children studied, and a careful study of community background has been contributed by a trained staff.

A large number of Indian Service teachers, field nurses, and doctors have participated in the field studies supervised and directed by a small corps of specialists supplied by the University of Chicago under the co-ordinating direction of Dr. Laura Thompson on behalf of the University. At this writing, the field work and much of the specialized study of the data have been completed and work is progressing on five monographs, one for each tribal area studied which will present a picture of the society; of the individual's place in that society; the formative experiences of children in that society; and the result of these experiences in personality formation. The research group will then undertake the preparation of a series of short monographs summarizing the administrative implications of the research as they may be applied in reservation administration, in school administration, or curriculum construction. None of the material has as yet been published, but it is hoped that all of the pamphlets may appear

under the imprint of either the University of Chicago or the United States Indian Service before the close of 1944.

### Study of Cultural Adjustments

A study of the wartime employment and cultural adjustments of the Rosebud Sioux was undertaken jointly by the Office of Indian Affairs and the University of South Dakota (5). This study was conducted among Dakota Indians on the Rosebud Reservation and those who had left for employment in war industries and agricultural areas in South Dakota and neighboring states. About 250 employable male Sioux on the reservation were interviewed by questionnaire to learn their education and past employment experience. Interviews were then conducted among the Indians and their employers in areas outside the reservation. It was learned in the industrial areas that Indians who had received work experience and training on CCC and relief projects were doing better than average work, but those who were inexperienced did poorer than average work as compared to the white worker. It was found that there was racial segregation thru choice of the Indian and by white pressure in residential areas of the industrial towns. This made for poor social adjustment. In the agricultural areas, the Indians were entering a new type of employment, cultivating and harvesting sugar beets. They found difficulty in adjusting to the new technic, the time requirements, and white employers unused to Indian labor. They had less problems of social adjustment, however, than their tribesmen in the cities.

The problem of adjustments centers around (a) cultural differences of the Dakota which made adaptation to competitive wage work economy arduous for the Sioux, (b) inadequate preparation in speaking English, and (c) white stereotype of Indian inferiority.

### Study of Nutrition and Health

The Nutrition Program inaugurated by the Health Division of the Indian Service in 1942 was necessarily curtailed due to the fact that Dr. Michel Pijoan, who was in charge of the study, was called to military services. After a lapse of some months, the Indian Service was fortunate in being able to obtain the services of Dr. Irvin H. Moore.

The objectives of the applied Nutrition Program of the Health Division may be stated broadly as follows:

1. To establish as accurately as possible the present nutritive status of the Indian population. This is being accomplished by physical examination and laboratory analysis.
2. To formulate the most efficient and economic corrective measures necessary to ultimately bring each Indian family and individual to a state of self-sufficiency and adequacy of food supply and utilization, insofar as possible within the limits of land resources, available foods, water supply, climate, and existing cultural patterns.
3. To coordinate the effort of all Indian Service personnel concerned with problems of food production, processing, distribution, utilization, general health education, welfare, and related subjects.
4. To periodically evaluate results of the program, showing the cost and efficiency of measures used.

Dr. Pijoan's work consisted, in the beginning, of sample studies among the Indians of Western Shoshone (Nevada), Papago, Pima, Hopi, Navajo (Arizona), and Pueblos of New Mexico, particularly of the Canon de Taos. He was able to demonstrate markedly lowered iron content of the blood, ascorbic acid deficiency, diminished iron and other chemical content of breast milk, general lack of proteins and necessary vitamins in the food, and other factors contributing to lowered resistance and body economy among Indians and Spanish Americans.

Following these initial studies, Dr. Moore will work primarily among the Navajo of northern Arizona and attempt more detailed analysis and specific application of corrective measures.

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